



US Army Corps  
of Engineers  
Savannah District

# Fort Stewart Georgia

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**Solicitation Number**

**W912HN-05-R-0043**

**Urban Assault Course Complex and Shoot House**

**Volume I of II – Sections 00010 through 00800 and**

**Technical Provisions – Divisions 1 and 2**

**FY-05, Line Items 57790 and 57792**

**October 2005**

U.S. ARMY ENGINEER DISTRICT, SAVANNAH  
CORPS OF ENGINEERS  
100 WEST OGLETHORPE AVENUE  
SAVANNAH, GEORGIA 31401-3640

|   |  |  |                               |                           |
|---|--|--|-------------------------------|---------------------------|
| <b>SOLICITATION, OFFER,<br/>AND AWARD</b><br><i>(Construction, Alteration, or Repair)</i>   | 1. SOLICITATION NO.<br>W912HN-05-R-0043-0002 | 2. TYPE OF SOLICITATION<br><input type="checkbox"/> SEALED BID (IFB)<br><input checked="" type="checkbox"/> NEGOTIATED (RFP)         | 3. DATE ISSUED<br>13-Oct-2005 | PAGE OF PAGES<br>1 OF 133 |
| <b>IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.</b>   |  |  |                               |                           |
| 4. CONTRACT NO.   | 5. REQUISITION/PURCHASE REQUEST NO.          |  | 6. PROJECT NO.                |                           |
| 7. ISSUED BY CODE W912HN<br>US ARMY ENGINEER DISTRICT SAVANNAH<br>100 W OGLETHORPE AVENUE<br>SAVANNAH GA 31401-3640<br><br>TEL: FAX:  |  | 8. ADDRESS OFFER TO <i>(If Other Than Item 7)</i> CODE<br><div style="text-align: center; padding: 20px;">See Item 7</div> TEL: FAX: |                               |                           |
| 9. FOR INFORMATION CALL:  | A. NAME<br>ROSETTA J BRIGHTWELL              | B. TELEPHONE NO. <i>(Include area code) (NO COLLECT CALLS)</i><br>912/652-5903   |                               |                           |
| <b>SOLICITATION</b>   |  |  |                               |                           |
| <b>NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".</b>   |  |  |                               |                           |
| 10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS <i>(Title, identifying no., date):</i><br><br><div style="text-align: center;">             URBAN ASSAULT COURSE AND SHOOTHOUSE<br/>             FORT STEWART, GEORGIA<br/><br/>             FY-06, LINE ITEM 57790 AND 57792           </div> <p>The proposal of the successful offeror shall be considered incorporated by reference upon award of contract.</p> <p>Contract Specialist: Sandy Meyers<br/>         Phone No. (912) 652-5324<br/>         E-mail: sandra.b.meyers@sas02.usace.army.mil</p>  |  |  |                               |                           |
| 11. The Contractor shall begin performance within <u>5</u> calendar days and complete it within <u>365</u> calendar days after receiving<br><input type="checkbox"/> award, <input checked="" type="checkbox"/> notice to proceed. This performance period is <input type="checkbox"/> mandatory, <input type="checkbox"/> negotiable. <i>(See Section 00800 .)</i>   |  |  |                               |                           |
| 12 A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS?<br><i>(If "YES," indicate within how many calendar days after award in Item 12B.)</i><br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO  |  |  | 12B. CALENDAR DAYS<br><br>5   |                           |
| 13. ADDITIONAL SOLICITATION REQUIREMENTS:<br><br>A. Sealed offers in original and <u>5</u> copies to perform the work required are due at the place specified in Item 8 by <u>11:00 AM</u> <i>(hour)</i><br>local time <u>08 Nov 2005</u> <i>(date)</i> . If this is a sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.<br><br>B. An offer guarantee <input checked="" type="checkbox"/> is, <input type="checkbox"/> is not required.<br><br>C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.<br><br>D. Offers providing less than <u>180</u> calendar days for Government acceptance after the date offers are due will not be considered and will be rejected. |  |  |                               |                           |

|  |  |                                       |           |      |  |  |  |  |                 |  |
|--|--|---------------------------------------|-----------|------|--|--|--|--|-----------------|--|
| <b>SOLICITATION, OFFER, AND AWARD (Continued)</b><br><i>(Construction, Alteration, or Repair)</i>  |  |                                       |           |      |  |  |  |  |                 |  |
| <b>OFFER (Must be fully completed by offeror)</b>  |  |                                       |           |      |  |  |  |  |                 |  |
| 14. NAME AND ADDRESS OF OFFEROR <i>(Include ZIP Code)</i>  |  |                                       |           |      |  | 15. TELEPHONE NO. <i>(Include area code)</i>   |  |  |                 |  |
|  |  |                                       |           |      |  | 16. REMITTANCE ADDRESS <i>(Include only if different than Item 14)</i><br><br><b>See Item 14</b>   |  |  |                 |  |
| CODE   |  | FACILITY CODE                         |           |      |  |  |  |  |                 |  |
| 17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within _____ calendar days after the date offers are due. <i>(Insert any number equal to or greater than the minimum requirements stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)</i>  |  |                                       |           |      |  |  |  |  |                 |  |
| AMOUNTS  |  | SEE SCHEDULE OF PRICES                |           |      |  |  |  |  |                 |  |
| 18. The offeror agrees to furnish any required performance and payment bonds.  |  |                                       |           |      |  |  |  |  |                 |  |
| 19. ACKNOWLEDGMENT OF AMENDMENTS<br><i>(The offeror acknowledges receipt of amendments to the solicitation -- give number and date of each)</i>  |  |                                       |           |      |  |  |  |  |                 |  |
| AMENDMENT NO.  |  |                                       |           |      |  |  |  |  |                 |  |
| DATE   |  |                                       |           |      |  |  |  |  |                 |  |
| 20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER <i>(Type or print)</i>  |  |                                       |           |      |  | 20B. SIGNATURE   |  |  | 20C. OFFER DATE |  |
| <b>AWARD (To be completed by Government)</b>   |  |                                       |           |      |  |  |  |  |                 |  |
| 21. ITEMS ACCEPTED:  |  |                                       |           |      |  |  |  |  |                 |  |
| 22. AMOUNT   |  | 23. ACCOUNTING AND APPROPRIATION DATA |           |      |  |  |  |  |                 |  |
| 24. SUBMIT INVOICES TO ADDRESS SHOWN IN<br><i>(4 copies unless otherwise specified)</i>  |  |                                       |           | ITEM |  | 25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO<br><input type="checkbox"/> 10 U.S.C. 2304(c) <input type="checkbox"/> 41 U.S.C. 253(c)   |  |  |                 |  |
| 26. ADMINISTERED BY  |  | CODE                                  |           |      |  | 27. PAYMENT WILL BE MADE BY:      CODE   |  |  |                 |  |
|  |  |                                       |           |      |  |  |  |  |                 |  |
| CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE  |  |                                       |           |      |  |  |  |  |                 |  |
| <input type="checkbox"/> 28. NEGOTIATED AGREEMENT <i>(Contractor is required to sign this document and return _____ copies to issuing office.)</i> Contractor agrees to furnish and deliver all items or perform all work, requisitions identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications or incorporated by reference in or attached to this contract. |  |                                       |           |      |  | <input type="checkbox"/> 29. AWARD <i>(Contractor is not required to sign this document.)</i><br>Your offer on this solicitation, is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary. |  |  |                 |  |
| 30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN <i>(Type or print)</i>  |  |                                       |           |      |  | 31A. NAME OF CONTRACTING OFFICER <i>(Type or print)</i><br><br>TEL:      EMAIL:  |  |  |                 |  |
| 30B. SIGNATURE   |  |                                       | 30C. DATE |      |  | 31B. UNITED STATES OF AMERICA BY   |  |  | 31C. AWARD DATE |  |

Section 00010 - Solicitation Contract Form

## **NOTICE TO OFFERORS**

### **HAND-CARRIED OR MAILED PROPOSALS:**

All proposals must be clearly identified with the contractor's name and address. To ensure timely and proper handling, the lower left corner of the outermost wrapper should indicate the Request For Proposal No., Due Date of Proposal, Time by which Proposals are Due, and Title of Project.

The Government will not be responsible for proposals delivered to any location or to anyone other than those designated to receive proposals on its behalf as indicated below.

Proposals delivered by commercial carrier and those sent by U.S. Mail, including U.S. Express Mail, must be addressed as indicated below. Proposals shall not be addressed to any specific person.

U.S. Army Engineer District, Savannah  
100 West Oglethorpe Avenue  
Savannah, Georgia 31401-3640

Mailroom personnel on the first floor of 100 West Oglethorpe Avenue must receive proposals sent by U.S. Mail or delivered by commercial carrier by the time specified in Block 13 of the SF1442 for receipt of proposals.

Offerors are cautioned that proposals sent via United States Postal Service Express Mail are first delivered to the Savannah District Post Office Box instead of 100 West Oglethorpe Avenue, "the office designated for receipt of proposals" therefore, allow sufficient mailing time.

Hand-carried proposals also must be delivered to mailroom personnel on the first floor of 100 West Oglethorpe Avenue by the time specified in Block 13 of SF1442 for receipt of proposals.

Offerors are cautioned that there is no parking in or around the building, therefore, when hand delivering proposals sufficient time should be allowed for transporting of proposal packages from your vehicle to mailroom personnel.

**FACSIMILE MODIFICATIONS OF PROPOSALS ARE NOT AUTHORIZED.**

### **QUALITY CONTROL SYSTEM (QCS)**

Any contract award resulting from this solicitation will require the mandatory use of the automated Quality Control System, Please see section 01312A for additional information.

Offerors' attention is directed to local clause 52.204-4005, **ONLINE REPRESENTATIONS AND CERTIFICATIONS APPLICATION** in Section 00600. This does not alleviate the requirements of the RFP to submit Reps/Certs with the proposal.

TECHNICAL MATTERS: Technical inquiries are to be submitted via Bidder Inquiry in ProjNet at [www.projnet.org/projnet](http://www.projnet.org/projnet)

To submit and review bid inquiry items, bidders will need to be a current registered user or self-register into system. To self-register go to web page, click BID tab select Bidder Inquiry, select agency USACE, enter Key for this solicitation listed below, and your e-mail address, click login. Fill in all required information and click create user. Verify that information on next screen is correct and click continue.

From this page you may view all bidder inquiries or add inquiry.

Bidders will receive an acknowledgement of their question via email, followed by an answer to their question after it has been processed by our technical team.

W912HN-05-R-0043

Bidder Inquiry Key RYJ3TE-QTTI1Y

## SUPPLIES OR SERVICES AND PRICES/COSTS

### SCHEDULE

#### URBAN ASSAULT COURSE AND SHOOT HOUSE FORT STEWART, GEORGIA

TOTAL BASE BID ITEMS 0001 and 0002-----\$\_\_\_\_\_

TOTAL BASE BID ITEMS 0001, 0003, and 0004-----\$\_\_\_\_\_

TOTAL BASE BID ITEMS 0002, 0005, and 0006-----\$\_\_\_\_\_

| ITEM NO | SUPPLIES/SERVICES  | QUANTITY | UNIT     | UNIT PRICE | AMOUNT  |
|---------|--|----------|----------|------------|---------|
| 0001    |  | 1        | Lump Sum | XXXXX      | \$_____ |
|         | BASE BID - Construct an Urban Assault Course (UAC) Complete which includes five (5) training stations; (1) Individual Team Station, 800 SF, (2) Squad Trainer Station, 2,400 SF, (3) Grenadier Station, 30 SF (4) Offense/Defense Building Station, 3,598 SF with (5) Underground Training Station attached. Construction of an Operations and Storage Building 800 SF for the UAC site. The work will include all site preparation for the development of electric service, storm drainage, demolition, and site improvements, Complete |          |          |            |         |

| ITEM NO | SUPPLIES/SERVICES  | QUANTITY | UNIT     | UNIT PRICE | AMOUNT   |
|---------|--|----------|----------|------------|----------|
| 0002    |  | 1        | Lump Sum | XXXXX      | \$ _____ |
|         | BASE BID - Construction of a two-story Shoot House, 3,896 SF. The work will include all site preparation for the development of electric service, storm drainage, information systems, and site improvements, Complete |          |          |            |          |

| ITEM NO | SUPPLIES/SERVICES  | QUANTITY | UNIT     | UNIT PRICE | AMOUNT   |
|---------|--|----------|----------|------------|----------|
| 0003    |  | 1        | Lump Sum | XXXXX      | \$ _____ |
|         | OPTION NO. 1 Construction of a Dry Latrine 193 for the UAC site. The work include all site preparation for the development of electric service, storm drainage and site improvements, complete |          |          |            |          |

| ITEM NO | SUPPLIES/SERVICES   | QUANTITY | UNIT     | UNIT PRICE | AMOUNT   |
|---------|---|----------|----------|------------|----------|
| 0004    |   | 1        | Lump Sum | XXXXX      | \$ _____ |
|         | OPTION NO. 2 Construction of aggregate base course for roadway and parking area at UAC site, complete |          |          |            |          |

| ITEM NO | SUPPLIES/SERVICES   | QUANTITY | UNIT     | UNIT PRICE | AMOUNT   |
|---------|---|----------|----------|------------|----------|
| 0005    |   | 1        | Lump Sum | XXXXX      | \$ _____ |
|         | Option No. 3 - Construction of a Maintenance/Storage Building 800 SF for the Shoot House site. The work will include all site preparation for the development of electric service, storm drainage and site improvements, complete |          |          |            |          |

| ITEM NO | SUPPLIES/SERVICES   | QUANTITY | UNIT     | UNIT PRICE | AMOUNT  |
|---------|---|----------|----------|------------|---------|
| 0006    |   | 1        | Lump Sum | XXXXX      | \$_____ |
|         | OTPION NO. 4 - Construction of a Dry Latrine 143 SF for the Shoot House site. The work will include all site preparation for the development of electric service, storm drainage and site improvements, complete. |          |          |            |         |

### INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

| CLIN | INSPECT AT | INSPECT BY | ACCEPT AT | ACCEPT BY  |
|------|------------|------------|-----------|------------|
| 0001 | N/A        | N/A        | N/A       | Government |
| 0002 | N/A        | N/A        | N/A       | Government |
| 0003 | N/A        | N/A        | N/A       | Government |
| 0004 | N/A        | N/A        | N/A       | Government |
| 0005 | N/A        | N/A        | N/A       | Government |
| 0006 | N/A        | N/A        | N/A       | Government |

## Section 00100 - Bidding Schedule/Instructions to Bidders

## CLAUSES INCORPORATED BY FULL TEXT

## 52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (OCT 2003)

(a) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" or "DUNS+4" followed by the DUNS number or "DUNS+4" that identifies the offeror's name and address exactly as stated in the offer. The DUNS number is a nine-digit number assigned by Dun and Bradstreet, Inc. The DUNS+4 is the DUNS number plus a 4-character suffix that may be assigned at the discretion of the offeror to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see Subpart 32.11) for the same parent concern.

(b) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number--

(i) If located within the United States, by calling Dun and Bradstreet at 1-866-705-5711 or via the Internet at <http://www.dnb.com>; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business name.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company physical street address, city, state and Zip Code.

(iv) Company mailing address, city, state and Zip Code (if separate from physical).

(v) Company telephone number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(End of provision)

52.211-2 AVAILABILITY OF SPECIFICATIONS LISTED IN THE DOD INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) AND DESCRIPTIONS LISTED IN THE ACQUISITION MANAGEMENT SYSTEMS AND DATA REQUIREMENTS CONTROL LIST, DOD 5010.12-L (DEC 2003)

Copies of specifications, standards, and data item descriptions cited in this solicitation may be obtained--



(a) From the ASSIST database via the Internet at <http://assist.daps.dla.mil>; or

(b) By submitting a request to the--Department of Defense Single Stock Point (DoDSSP), Building 4, Section D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Telephone (215) 697-2179, Facsimile (215) 697-1462.

(End of provision)

#### 52.211-14 NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (SEP 1990)

Any contract awarded as a result of this solicitation will be DO-C2 rated order certified for national defense use under the Defense Priorities and Allocations System (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation.

(End of provision)

#### 52.215-1 INSTRUCTIONS TO OFFERORS--COMPETITIVE ACQUISITION (JAN 2004)—ALTERNATE I (OCT 1997)

(a) Definitions. As used in this provision--

“Discussions” are negotiations that occur after establishment of the competitive range that may, at the Contracting Officer's discretion, result in the offeror being allowed to revise its proposal.

In writing, writing, or written” means any worded or numbered expression which can be read, reproduced, and later communicated, and includes electronically transmitted and stored information.

“Proposal modification” is a change made to a proposal before the solicitation's closing date and time, or made in response to an amendment, or made to correct a mistake at any time before award.

“Proposal revision” is a change to a proposal made after the solicitation closing date, at the request of or as allowed by a Contracting Officer as the result of negotiations.

“Time”, if stated as a number of days, is calculated using calendar days, unless otherwise specified, and will include Saturdays, Sundays, and legal holidays. However, if the last day falls on a Saturday, Sunday, or legal holiday, then the period shall include the next working day.

(b) Amendments to solicitations. If this solicitation is amended, all terms and conditions that are not amended remain unchanged. Offerors shall acknowledge receipt of any amendment to this solicitation by the date and time specified in the amendment(s).

(c) Submission, modification, revision, and withdrawal of proposals. (1) Unless other methods (e.g., electronic commerce or facsimile) are permitted in the solicitation, proposals and modifications to proposals shall be submitted in paper media in sealed envelopes or packages (i) addressed to the office specified in the solicitation, and (ii) showing the time and date specified for receipt, the solicitation number, and the name and address of the offeror. Offerors using commercial carriers should ensure that the proposal is marked on the outermost wrapper with the information in paragraphs (c)(1)(i) and (c)(1)(ii) of this provision.

(2) The first page of the proposal must show--

- (i) The solicitation number;
  - (ii) The name, address, and telephone and facsimile numbers of the offeror (and electronic address if available);
  - (iii) A statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation and agreement to furnish any or all items upon which prices are offered at the price set opposite each item;
  - (iv) Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the offeror's behalf with the Government in connection with this solicitation; and
  - (v) Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.
- (3) Submission, modification, or revisions of proposals. (i) Offerors are responsible for submitting proposals, and any modifications, revisions, or withdrawals, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that proposal or revision is due.
- (ii)(A) Any proposal, modification, or revision received at the Government office designated in the solicitation after the exact time specified for receipt of offers is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and--
- (1) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or
- (2) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or
- (3) It is the only proposal received.
- (B) However, a late modification of an otherwise successful proposal that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.
- (iii) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.
- (iv) If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the office designated for receipt of proposals by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.
- (v) Proposals may be withdrawn by written notice received at any time before award. Oral proposals in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile proposals, proposals may be withdrawn via facsimile received at any time before award, subject to the conditions specified in the provision at 52.215-5, Facsimile Proposals. Proposals may be withdrawn in person by an offeror or an authorized representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.

- (4) Unless otherwise specified in the solicitation, the offeror may propose to provide any item or combination of items.
- (5) Offerors shall submit proposals in response to this solicitation in English, unless otherwise permitted by the solicitation, and in U.S. dollars, unless the provision at FAR 52.225-17, Evaluation of Foreign Currency Offers, is included in the solicitation.
- (6) Offerors may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.
- (7) Offerors may submit revised proposals only if requested or allowed by the Contracting Officer.
- (8) Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Contracting Officer.
- (d) Offer expiration date. Proposals in response to this solicitation will be valid for the number of days specified on the solicitation cover sheet (unless a different period is proposed by the offeror).
- (e) Restriction on disclosure and use of data. Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall--
- (1) Mark the title page with the following legend: This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed--in whole or in part--for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of--or in connection with-- the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [insert numbers or other identification of sheets]; and
- (2) Mark each sheet of data it wishes to restrict with the following legend: Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.
- (f) Contract award. (1) The Government intends to award a contract or contracts resulting from this solicitation to the responsible offeror(s) whose proposal(s) represents the best value after evaluation in accordance with the factors and subfactors in the solicitation.
- (2) The Government may reject any or all proposals if such action is in the Government's interest.
- (3) The Government may waive informalities and minor irregularities in proposals received.
- (4) The Government intends to evaluate proposals and award a contract after conducting discussions with offerors whose proposals have been determined to be within the competitive range. If the Contracting Officer determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the Contracting Officer may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals. Therefore, the offeror's initial proposal should contain the offeror's best terms from a price and technical standpoint.
- (5) The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit cost or prices offered, unless the offeror specifies otherwise in the proposal.
- (6) The Government reserves the right to make multiple awards if, after considering the additional administrative costs, it is in the Government's best interest to do so.

(7) Exchanges with offerors after receipt of a proposal do not constitute a rejection or counteroffer by the Government.

(8) The Government may determine that a proposal is unacceptable if the prices proposed are materially unbalanced between line items or subline items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer determines that the lack of balance poses an unacceptable risk to the Government.

(9) If a cost realism analysis is performed, cost realism may be considered by the source selection authority in evaluating performance or schedule risk.

(10) A written award or acceptance of proposal mailed or otherwise furnished to the successful offeror within the time specified in the proposal shall result in a binding contract without further action by either party.

(11) If a post-award debriefing is given to requesting offerors, the Government shall disclose the following information, if applicable:

(i) The agency's evaluation of the significant weak or deficient factors in the debriefed offeror's offer.

(ii) The overall evaluated cost or price and technical rating of the successful and the debriefed offeror and past performance information on the debriefed offeror.

(iii) The overall ranking of all offerors, when any ranking was developed by the agency during source selection.

(iv) A summary of the rationale for award.

(v) For acquisitions of commercial items, the make and model of the item to be delivered by the successful offeror.

(vi) Reasonable responses to relevant questions posed by the debriefed offeror as to whether source-selection procedures set forth in the solicitation, applicable regulations, and other applicable authorities were followed by the agency.

(End of provision)

#### 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)

(a) Exceptions from cost or pricing data. (1) In lieu of submitting cost or pricing data, offerors may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable.

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) Commercial item exception. For a commercial item exception, the offeror shall submit, at a minimum, information on prices at which the same item or similar items have previously been sold in the commercial market that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include--

(A) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities;

(B) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market;

(C) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The offeror grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this provision, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the offeror's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the offeror is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The offeror shall prepare and submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

As soon as practicable after agreement on price, but before contract award (except for unpriced actions such as letter contracts), the offeror shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

(End of provision)

#### 52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a **FIRM FIXED PRICE** contract resulting from this solicitation.

(End of clause)

#### 52.217-5 EVALUATION OF OPTIONS (JUL 1990)

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

(End of provision)

#### 52.222-23 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION (FEB 1999)

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

| Goals for minority<br>participation for each trade | Goals for female<br>participation for each trade |
|--|--|
| 29.8%  | 6.9%   |

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the --

- (1) Name, address, and telephone number of the subcontractor;
- (2) Employer's identification number of the subcontractor;
- (3) Estimated dollar amount of the subcontract;
- (4) Estimated starting and completion dates of the subcontract; and
- (5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is Liberty County, Fort Stewart, Georgia.

(End of provision)

#### 52.225-10 NOTICE OF BUY AMERICAN ACT REQUIREMENT--CONSTRUCTION MATERIALS (MAY 2002)

(a) Definitions. Construction material, domestic construction material, and foreign construction material, as used in this provision, are defined in the clause of this solicitation entitled "Buy American Act --Construction Materials" (Federal Acquisition Regulation (FAR) clause 52.225-9).

(b) Requests for determinations of inapplicability. An offeror requesting a determination regarding the inapplicability of the Buy American Act should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) Evaluation of offers. (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act, based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) Alternate offers.

(1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror also may submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at FAR 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at FAR 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested--

(i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or

(ii) May be accepted if revised during negotiations.

(End of provision)

52.232-4006 SUBJECT TO AVAILABILITY OF FUNDS STATEMENT (SEP 1999  
SASCT) (Ref. AFARS 5101.602-2)

This is a high priority requirement as defined in Army Federal Acquisition Regulation (AFAR) Supplement 5101.602-2. Subject to the availability of funds, the accounting classification will be 2162050 608 8021 P100000 3230 S09133. This statement is not a commitment of funds. Funds are not presently available for this acquisition. No contract award will be made until appropriated funds are made available from which payment for contract purposes can be made.

(End of provision)

## 52.233-2 SERVICE OF PROTEST (AUG 1996)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from

U.S. Army Corps of Engineers, Savannah District  
ATTN: CESAS-CT-C  
100 West Oglethorpe Avenue  
Savannah, Georgia 31401-3640

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

## 52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) Site visits may be arranged during normal duty hours by contacting:

Name: David Warren  
Address: Fort Stewart Area Office (CD-ST), Bldg. 936, Wilson Road, Fort Stewart, GA 31314  
Telephone: (912) 767-6878

(End of provision)

## 52.236-28 PREPARATION OF PROPOSALS--CONSTRUCTION (OCT 1997)

(a) Proposals must be (1) submitted on the forms furnished by the Government or on copies of those forms, and (2) manually signed. The person signing a proposal must initial each erasure or change appearing on any proposal form.

(b) The proposal form may require offerors to submit proposed prices for one or more items on various bases, including--

(1) Lump sum price;

(2) Alternate prices;

(3) Units of construction; or

(4) Any combination of paragraphs (b)(1) through (b)(3) of this provision.

(c) If the solicitation requires submission of a proposal on all items, failure to do so may result in the proposal being rejected without further consideration. If a proposal on all items is not required, offerors should insert the words "no proposal" in the space provided for any item on which no price is submitted.



(d) Alternate proposals will not be considered unless this solicitation authorizes their submission.

(End of provision)

## Section 00600 - Representations &amp; Certifications

## CLAUSES INCORPORATED BY FULL TEXT

## 52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (JAN 2005)

(a)(1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (b) of this provision applies.

(2) If the clause at 52.204-7 is not included in this solicitation, and the offeror is currently registered in CCR, and has completed the ORCA electronically, the offeror may choose to use paragraph (b) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:

☐ Paragraph (b) applies.

☐ Paragraph (b) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(b) The offeror has completed the annual representations and certifications electronically via the Online Representations and Certifications Application (ORCA) website at <http://orca.bpn.gov>. After reviewing the ORCA database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [offeror to insert changes, identifying change by clause number, title, date]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

| FAR Clause | Title | Date  | Change |
|------------|-------|-------|--------|
| -----      | ----- | ----- | -----  |
| -----      | ----- | ----- | -----  |
| -----      | ----- | ----- | -----  |

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

(End of Provision)

## 52.204-4005 Online Representations and Certifications Application (ORCA).

Beginning January 1, 2005, the Federal Acquisition Regulation (FAR) requires the use of ORCA in Federal solicitations as a part of the proposal submission process. ORCA is a web-based system that centralizes and standardizes the collection, storage and viewing of many of the representations and certifications required by the Federal Acquisition Regulations and previously found in solicitations. Prospective contractors must complete the electronic representations and certifications through ORCA at <http://orca.bpn.gov>. The representations and certifications submitted to ORCA must be updated as necessary but at least annually to maintain an active status. In addition to the use of ORCA as required by other clause or clauses in this solicitation, prospective contractors must complete the representations and certifications included in this solicitation.

## 52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (MAY 2004) - ALTERNATE I (APR 2002)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 236220.

(2) The small business size standard is \$28,500,000.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations. (1) The offeror represents as part of its offer that it ( ) is, ( ) is not a small business concern.

(2) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, for general statistical purposes, that it ( ) is, ( ) is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it ( ) is, ( ) is not a women-owned small business concern.

(4) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it ( ) is, ( ) is not a veteran-owned small business concern.

(5) (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.) The offeror represents as part of its offer that it ( ) is, ( ) is not a service-disabled veteran-owned small business concern.

(6) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents, as part of its offer, that--

(i) It ( ) is, ( ) is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It ( ) is, ( ) is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. (The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture:\_\_\_\_\_.) Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(7) (Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.) The offeror shall check the category in which its ownership falls:

\_\_\_\_ Black American.

\_\_\_\_ Hispanic American.

\_\_\_\_ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

\_\_\_\_ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

\_\_\_\_ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

\_\_\_\_ Individual/concern, other than one of the preceding.

(c) Definitions. As used in this provision--

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern," means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern," means a small business concern --

(1) That is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; or

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice.

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

## Section 00700 - Contract Clauses

## CLAUSES INCORPORATED BY FULL TEXT

## 52.202-1 DEFINITIONS (JUL 2004)

(a) When a solicitation provision or contract clause uses a word or term that is defined in the Federal Acquisition Regulation (FAR), the word or term has the same meaning as the definition in FAR 2.101 in effect at the time the solicitation was issued, unless--

- (1) The solicitation, or amended solicitation, provides a different definition;
- (2) The contracting parties agree to a different definition;
- (3) The part, subpart, or section of the FAR where the provision or clause is prescribed provides a different meaning; or
- (4) The word or term is defined in FAR Part 31, for use in the cost principles and procedures.

(b) The FAR Index is a guide to words and terms the FAR defines and shows where each definition is located. The FAR Index is available via the Internet at <http://www.acqnet.gov> at the end of the FAR, after the FAR Appendix.

(End of clause)

## 52.203-3 GRATUITIES (APR 1984)

(a) The right of the Contractor to proceed may be terminated by written notice if, after notice and hearing, the agency head or a designee determines that the Contractor, its agent, or another representative--

- (1) Offered or gave a gratuity (e.g., an entertainment or gift) to an officer, official, or employee of the Government; and
- (2) Intended, by the gratuity, to obtain a contract or favorable treatment under a contract.

(b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.

(c) If this contract is terminated under paragraph (a) of this clause, the Government is entitled--

- (1) To pursue the same remedies as in a breach of the contract; and
- (2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c)(2) is applicable only if this contract uses money appropriated to the Department of Defense.)

(d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

**52.203-5 COVENANT AGAINST CONTINGENT FEES (APR 1984)**

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

(b) "Bona fide agency," as used in this clause, means an established commercial or selling agency, maintained by a contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a contractor and subject to the contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee," as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

(End of clause)

**52.203-6 RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (JUL 1995)**

(a) Except as provided in (b) of this clause, the Contractor shall not enter into any agreement with an actual or prospective subcontractor, nor otherwise act in any manner, which has or may have the effect of restricting sales by such subcontractors directly to the Government of any item or process (including computer software) made or furnished by the subcontractor under this contract or under any follow-on production contract.

(b) The prohibition in (a) of this clause does not preclude the Contractor from asserting rights that are otherwise authorized by law or regulation.

(c) The Contractor agrees to incorporate the substance of this clause, including this paragraph (c), in all subcontracts under this contract which exceed \$100,000.

**52.203-7 ANTI-KICKBACK PROCEDURES. (JUL 1995)**

(a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor," as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from -

(1) Providing or attempting to provide or offering to provide any kickback;

(2) Soliciting, accepting, or attempting to accept any kickback; or

(3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

(c)(1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

(2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.

(3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

(4) The Contracting Officer may (i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or (ii) direct that the Prime Contractor withhold, from sums owed a subcontractor under the prime contract, the amount of any kickback. The Contracting Officer may order the monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

(5) The Contractor agrees to incorporate the substance of this clause, including this subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under this contract which exceed \$100,000.



52.203-8 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) If the Government receives information that a contractor or a person has engaged in conduct constituting a violation of subsection (a), (b), (c), or (d) of Section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) (the Act), as amended by section 4304 of the 1996 National Defense Authorization Act for Fiscal Year 1996 (Pub. L. 104-106), the Government may--

(1) Cancel the solicitation, if the contract has not yet been awarded or issued; or

(2) Rescind the contract with respect to which--

(i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27(a) or (b) of the Act for the purpose of either--

(A) Exchanging the information covered by such subsections for anything of value; or

(B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or

(ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsections 27(e)(1) of the Act.

(b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.

(End of clause)

52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) The Government, at its election, may reduce the price of a fixed-price type contract and the total cost and fee under a cost-type contract by the amount of profit or fee determined as set forth in paragraph (b) of this clause if the head of the contracting activity or designee determines that there was a violation of subsection 27 (a), (b), or (c) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in section 3.104 of the Federal Acquisition Regulation.

(b) The price or fee reduction referred to in paragraph (a) of this clause shall be--

(1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;

(2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract;

(3) For cost-plus-award-fee contracts--

- (i) The base fee established in the contract at the time of contract award;
- (ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.

(4) For fixed-price-incentive contracts, the Government may--

- (i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award; or
- (ii) If an immediate adjustment to the contract target price and contract target profit would have a significant adverse impact on the incentive price revision relationship under the contract, or adversely affect the contract financing provisions, the Contracting Officer may defer such adjustment until establishment of the total final price of the contract. The total final price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the initial target profit specified in the contract at the time of contract award and such reduced price shall be the total final contract price.

(5) For firm-fixed-price contracts, by 10 percent of the initial contract price or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award.

(c) The Government may, at its election, reduce a prime contractor's price or fee in accordance with the procedures of paragraph (b) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.

(d) In addition to the remedies in paragraphs (a) and (c) of this clause, the Government may terminate this contract for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (JUN 2003)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

- (1) The awarding of any Federal contract.
- (2) The making of any Federal grant.
- (3) The making of any Federal loan.
- (4) The entering into of any cooperative agreement.
- (5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

- (1) An individual who is appointed to a position in the Government under Title 5, United States Code, including a position under a temporary appointment.
- (2) A member of the uniformed services, as defined in subsection 101(3), Title 37, United States Code.
- (3) A special Government employee, as defined in section 202, Title 18, United States Code.
- (4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, Title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

State, as used in this clause, means a State of the United States, the District of Columbia, or an outlying area of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

(1) Section 1352 of Title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action--

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of--

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(c) Disclosure.

(1) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(2) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes--

(i) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(3) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding \$100,000 under the Federal contract.

(4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(d) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(e) Penalties.

(1) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(2) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(f) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

(End of clause)

#### 52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)

(a) Definitions. As used in this clause--

“Postconsumer material” means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of “recovered material.” For paper and paper products, postconsumer material means “postconsumer fiber” defined by the U.S. Environmental Protection Agency (EPA) as--

(1) Paper, paperboard, and fibrous materials from retail stores, office buildings, homes, and so forth, after they have passed through their end-usage as a consumer item, including: used corrugated boxes; old newspapers; old magazines; mixed waste paper; tabulating cards; and used cordage; or

(2) All paper, paperboard, and fibrous materials that enter and are collected from municipal solid waste; but not

(3) Fiber derived from printers' over-runs, converters' scrap, and over-issue publications.

“Printed or copied double-sided” means printing or reproducing a document so that information is on both sides of a sheet of paper.

“Recovered material,” for paper and paper products, is defined by EPA in its Comprehensive Procurement Guideline as “recovered fiber” and means the following materials:

(1) Postconsumer fiber; and

(2) Manufacturing wastes such as--

(i) Dry paper and paperboard waste generated after completion of the papermaking process (that is, those manufacturing operations up to and including the cutting and trimming of the paper machine reel into smaller rolls or rough sheets) including: envelope cuttings, bindery trimmings, and other paper and paperboard waste resulting from printing, cutting, forming, and other converting operations; bag, box, and carton manufacturing wastes; and butt rolls, mill wrappers, and rejected unused stock; and

(ii) Repulped finished paper and paperboard from obsolete inventories of paper and paperboard manufacturers, merchants, wholesalers, dealers, printers, converters, or others.

(b) In accordance with Section 101 of Executive Order 13101 of September 14, 1998, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, the Contractor is encouraged to submit paper documents, such as offers, letters, or reports, that are printed or copied double-sided on recycled paper that meet minimum content standards specified in Section 505 of Executive Order 13101, when not using electronic commerce methods to submit information or data to the Government.

(c) If the Contractor cannot purchase high-speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, white wove envelopes, writing and office paper, book paper, cotton fiber paper, and cover stock meeting the 30 percent postconsumer material standard for use in submitting paper documents to the Government, it should use paper containing no less than 20 percent postconsumer material. This lesser standard should be used only when paper meeting the 30 percent postconsumer material standard is not obtainable at a reasonable price or does not meet reasonable performance standards.

(End of clause)

## 52.204-7 CENTRAL CONTRACTOR REGISTRATION (OCT 2003)

(a) Definitions. As used in this clause--

Central Contractor Registration (CCR) database means the primary Government repository for Contractor information required for the conduct of business with the Government.

Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see the FAR at Subpart 32.11) for the same parent concern.

Registered in the CCR database means that--

(1) The Contractor has entered all mandatory information, including the DUNS number or the DUNS+4 number, into the CCR database; and

(2) The Government has validated all mandatory data fields and has marked the record "Active".

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the CCR database prior to award, during performance, and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement resulting from this solicitation.

(2) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" or "DUNS +4" followed by the DUNS or DUNS +4 number that identifies the offeror's name and address exactly as stated in the offer. The DUNS number will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(c) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number--

(i) If located within the United States, by calling Dun and Bradstreet at 1-866-705-5711 or via the Internet at <http://www.dnb.com>; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company Physical Street Address, City, State, and Zip Code.

(iv) Company Mailing Address, City, State and Zip Code (if separate from physical).

(v) Company Telephone Number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(d) If the Offeror does not become registered in the CCR database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror.

(e) Processing time, which normally takes 48 hours, should be taken into consideration when registering. Offerors who are not registered should consider applying for registration immediately upon receipt of this solicitation.

(f) The Contractor is responsible for the accuracy and completeness of the data within the CCR database, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.



(g)(1)(i) If a Contractor has legally changed its business name, "doing business as" name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in Subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of Subpart 42.12 of the FAR; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (g)(1)(i) of this clause, or fails to perform the agreement at paragraph (g)(1)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(2) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see FAR Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the "Suspension of payment" paragraph of the EFT clause of this contract.

(h) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at <http://www.ccr.gov> or by calling 1-888-227-2423, or 269-961-5757.

(End of clause)

#### 52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JAN 2005)

(a) The Government suspends or debar Contractors to protect the Government's interests. The Contractor shall not enter into any subcontract in excess of the \$25,000 with a Contractor that is debarred, suspended, or proposed for debarment unless there is a compelling reason to do so.

(b) The Contractor shall require each proposed first-tier subcontractor, whose subcontract will exceed \$25,000, to disclose to the Contractor, in writing, whether as of the time of award of the subcontract, the subcontractor, or its principles, is or is not debarred, suspended, or proposed for debarment by the Federal Government.

(c) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is debarred, suspended, or proposed for debarment (see FAR 9.404 for information on the in the Excluded Parties List System). The notice must include the following:

(1) The name of the subcontractor.

(2) The Contractor's knowledge of the reasons for the subcontractor being in the Excluded Parties List System.

(3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion in the Excluded Parties List System.

(4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

(End of clause)

#### 52.211-15 DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS (SEP 1990)

This is a rated order certified for national defense use, and the Contractor shall follow all the requirements of the Defense Priorities and Allocations System regulation (15 CFR 700).

(End of clause)

#### 52.215-2 AUDIT AND RECORDS--NEGOTIATION (JUN 1999)

(a) As used in this clause, "records" includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.

(b) Examination of costs. If this is a cost-reimbursement, incentive, time-and-materials, labor-hour, or price redeterminable contract, or any combination of these, the Contractor shall maintain and the Contracting Officer, or an authorized representative of the Contracting Officer, shall have the right to examine and audit all records and other evidence sufficient to reflect properly all costs claimed to have been incurred or anticipated to be incurred directly or indirectly in performance of this contract. This right of examination shall include inspection at all reasonable times of the Contractor's plants, or parts of them, engaged in performing the contract.

(c) Cost or pricing data. If the Contractor has been required to submit cost or pricing data in connection with any pricing action relating to this contract, the Contracting Officer, or an authorized representative of the Contracting Officer, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data, shall have the right to examine and audit all of the Contractor's records, including computations and projections, related to--

(1) The proposal for the contract, subcontract, or modification;

(2) The discussions conducted on the proposal(s), including those related to negotiating;

(3) Pricing of the contract, subcontract, or modification; or

(4) Performance of the contract, subcontract or modification.

(d) Comptroller General--(1) The Comptroller General of the United States, or an authorized representative, shall have access to and the right to examine any of the Contractor's directly pertinent records involving transactions related to this contract or a subcontract hereunder.

(2) This paragraph may not be construed to require the Contractor or subcontractor to create or maintain any record that the Contractor or subcontractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e) Reports. If the Contractor is required to furnish cost, funding, or performance reports, the Contracting Officer or an authorized representative of the Contracting Officer shall have the right to examine and audit the supporting records and materials, for the purpose of evaluating (1) the effectiveness of the Contractor's policies and procedures to produce data compatible with the objectives of these reports and (2) the data reported.

(f) Availability. The Contractor shall make available at its office at all reasonable times the records, materials, and other evidence described in paragraphs (a), (b), (c), (d), and (e) of this clause, for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in Subpart 4.7,

Contractor Records Retention, of the Federal Acquisition Regulation (FAR), or for any longer period required by statute or by other clauses of this contract. In addition--

(1) If this contract is completely or partially terminated, the Contractor shall make available the records relating to the work terminated until 3 years after any resulting final termination settlement; and

(2) The Contractor shall make available records relating to appeals under the Disputes clause or to litigation or the settlement of claims arising under or relating to this contract until such appeals, litigation, or claims are finally resolved.

(g) The Contractor shall insert a clause containing all the terms of this clause, including this paragraph (g), in all subcontracts under this contract that exceed the simplified acquisition threshold, and--

(1) That are cost-reimbursement, incentive, time-and-materials, labor-hour, or price-redeterminable type or any combination of these;

(2) For which cost or pricing data are required; or

(3) That require the subcontractor to furnish reports as discussed in paragraph (e) of this clause.

The clause may be altered only as necessary to identify properly the contracting parties and the Contracting Officer under the Government prime contract.

(End of clause)

#### 52.215-10 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA (OCT 1997)

(a) If any price, including profit or fee, negotiated in connection with this contract, or any cost reimbursable under this contract, was increased by any significant amount because--

(1) The Contractor or a subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data;

(2) A subcontractor or prospective subcontractor furnished the Contractor cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data; or

(3) Any of these parties furnished data of any description that were not accurate, the price or cost shall be reduced accordingly and the contract shall be modified to reflect the reduction.

(b) Any reduction in the contract price under paragraph (a) of this clause due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which--

(1) The actual subcontract; or

(2) The actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective cost or pricing data.

(c)(1) If the Contracting Officer determines under paragraph (a) of this clause that a price or cost reduction should be made, the Contractor agrees not to raise the following matters as a defense:

(i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted.

(ii) The Contracting Officer should have known that the cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer.

(iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract.

(iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.

(2)(i) Except as prohibited by subdivision (c)(2)(ii) of this clause, an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if--

(A) The Contractor certifies to the Contracting Officer that, to the best of the Contractor's knowledge and belief, the Contractor is entitled to the offset in the amount requested; and

(B) The Contractor proves that the cost or pricing data were available before the "as of" date specified on its Certificate of Current Cost or Pricing Data, and that the data were not submitted before such date.

(ii) An offset shall not be allowed if--

(A) The understated data were known by the Contractor to be understated before the "as of" date specified on its Certificate of Current Cost or Pricing Data; or

(B) The Government proves that the facts demonstrate that the contract price would not have increased in the amount to be offset even if the available data had been submitted before the "as of" date specified on its Certificate of Current Cost or Pricing Data.

(d) If any reduction in the contract price under this clause reduces the price of items for which payment was made prior to the date of the modification reflecting the price reduction, the Contractor shall be liable to and shall pay the United States at the time such overpayment is repaid--

(1) Simple interest on the amount of such overpayment to be computed from the date(s) of overpayment to the Contractor to the date the Government is repaid by the Contractor at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2); and

A penalty equal to the amount of the overpayment, if the Contractor or subcontractor knowingly submitted cost or pricing data that were incomplete, inaccurate, or noncurrent.

(End of clause)

52.215-11 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA--MODIFICATIONS (OCT 1997)

(a) This clause shall become operative only for any modification to this contract involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, except that this clause does not apply to any modification if an exception under FAR 15.403-1 applies.

(b) If any price, including profit or fee, negotiated in connection with any modification under this clause, or any cost reimbursable under this contract, was increased by any significant amount because (1) the Contractor or a subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data, (2) a subcontractor or prospective subcontractor furnished the Contractor cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data, or (3) any of these parties furnished data of any description that were not accurate, the price or cost shall be reduced accordingly and the contract shall be modified to reflect the reduction. This right to a price reduction is limited to that resulting from defects in data relating to modifications for which this clause becomes operative under paragraph (a) of this clause.

(c) Any reduction in the contract price under paragraph (b) of this clause due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which--

(1) The actual subcontract; or

(2) The actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective cost or pricing data.

(d)(1) If the Contracting Officer determines under paragraph (b) of this clause that a price or cost reduction should be made, the Contractor agrees not to raise the following matters as a defense:

(i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted.

(ii) The Contracting Officer should have known that the cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer.

(iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract.

(iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.

(2)(i) Except as prohibited by subdivision (d)(2)(ii) of this clause, an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if--

(A) The Contractor certifies to the Contracting Officer that, to the best of the Contractor's knowledge and belief, the Contractor is entitled to the offset in the amount requested; and

(B) The Contractor proves that the cost or pricing data were available before the "as of" date specified on its Certificate of Current Cost or Pricing Data, and that the data were not submitted before such date.

(ii) An offset shall not be allowed if--

(A) The understated data were known by the Contractor to be understated before the "as of" date specified on its Certificate of Current Cost or Pricing Data; or

(B) The Government proves that the facts demonstrate that the contract price would not have increased in the amount to be offset even if the available data had been submitted before the "as of" date specified on its Certificate of Current Cost or Pricing Data.

(e) If any reduction in the contract price under this clause reduces the price of items for which payment was made prior to the date of the modification reflecting the price reduction, the Contractor shall be liable to and shall pay the United States at the time such overpayment is repaid--

(1) Simple interest on the amount of such overpayment to be computed from the date(s) of overpayment to the Contractor to the date the Government is repaid by the Contractor at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2); and

A penalty equal to the amount of the overpayment, if the Contractor or subcontractor knowingly submitted cost or pricing data that were incomplete, inaccurate, or noncurrent.

(End of clause)

#### 52.215-12 SUBCONTRACTOR COST OR PRICING DATA (OCT 1997)

(a) Before awarding any subcontract expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, on the date of agreement on price or the date of award, whichever is later; or before pricing any subcontract modification involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, the Contractor shall require the subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless an exception under FAR 15.403-1 applies.

(b) The Contractor shall require the subcontractor to certify in substantially the form prescribed in FAR 15.406-2 that, to the best of its knowledge and belief, the data submitted under paragraph (a) of this clause were accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.

(c) In each subcontract that exceeds the threshold for submission of cost or pricing data at FAR 15.403-4, when entered into, the Contractor shall insert either--

(1) The substance of this clause, including this paragraph (c), if paragraph (a) of this clause requires submission of cost or pricing data for the subcontract; or

(2) The substance of the clause at FAR 52.215-13, Subcontractor Cost or Pricing Data--Modifications.

#### 52.215-13 SUBCONTRACTOR COST OR PRICING DATA--MODIFICATIONS (OCT 1997)

(a) The requirements of paragraphs (b) and (c) of this clause shall--

(1) Become operative only for any modification to this contract involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4; and

(2) Be limited to such modifications.

(b) Before awarding any subcontract expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, on the date of agreement on price or the date of award, whichever is later; or before pricing any subcontract modification involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, the Contractor shall require the subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless an exception under FAR 15.403-1 applies.

(c) The Contractor shall require the subcontractor to certify in substantially the form prescribed in FAR 15.406-2 that, to the best of its knowledge and belief, the data submitted under paragraph (b) of this clause were accurate,

complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.

The Contractor shall insert the substance of this clause, including this paragraph (d), in each subcontract that exceeds the threshold for submission of cost or pricing data at FAR 15.403-4 on the date of agreement on price or the date of award, whichever is later.

(End of clause)

**52.215-18 REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS (OCT 1997)**

The Contractor shall promptly notify the Contracting Officer in writing when it determines that it will terminate or reduce a PRB plan. If PRB fund assets revert, or inure, to the Contractor or are constructively received by it under a plan termination or otherwise, the Contractor shall make a refund or give a credit to the Government for its equitable share as required by FAR 31.205-6(o)(6). The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirements of FAR 15.408(j).

(End of clause)

**52.215-19 NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)**

(a) The Contractor shall make the following notifications in writing:

(1) When the Contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.

(2) The Contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.

(b) The Contractor shall--

(1) Maintain current, accurate, and complete inventory records of assets and their costs;

(2) Provide the ACO or designated representative ready access to the records upon request;

(3) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Contractor's ownership changes; and

(4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership change.

The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(k).

(End of clause)

52.215-21 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS (OCT 1997)

(a) Exceptions from cost or pricing data. (1) In lieu of submitting cost or pricing data for modifications under this contract, for price adjustments expected to exceed the threshold set forth at FAR 15.403-4 on the date of the agreement on price or the date of the award, whichever is later, the Contractor may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable--

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) Information on modifications of contracts or subcontracts for commercial items. (A) If--

(1) The original contract or subcontract was granted an exception from cost or pricing data requirements because the price agreed upon was based on adequate price competition or prices set by law or regulation, or was a contract or subcontract for the acquisition of a commercial item; and

(2) The modification (to the contract or subcontract) is not exempted based on one of these exceptions, then the Contractor may provide information to establish that the modification would not change the contract or subcontract from a contract or subcontract for the acquisition of a commercial item to a contract or subcontract for the acquisition of an item other than a commercial item.

(B) For a commercial item exception, the Contractor shall provide, at a minimum, information on prices at which the same item or similar items have previously been sold that is adequate for evaluating the reasonableness of the price of the modification. Such information may include--

(1) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.

(2) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(3) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The Contractor grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this clause, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the Contractor's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the Contractor is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The Contractor shall submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.



As soon as practicable after agreement on price, but before award (except for unpriced actions), the Contractor shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

(End of clause)

#### 52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (MAY 2004)

(a) It is the policy of the United States that small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.

(b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

Definitions. As used in this contract--

HUBZone small business concern means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

Small business concern means a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto.

Small disadvantaged business concern means a small business concern that represents, as part of its offer that--

(1) It has received certification as a small disadvantaged business concern consistent with 13 CFR part 124, subpart B;

(2) No material change in disadvantaged ownership and control has occurred since its certification;

(3) Where the concern is owned by one or more individuals, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(4) It is identified, on the date of its representation, as a certified small disadvantaged business in the database maintained by the Small Business Administration (PRO-Net).

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

Women-owned small business concern means a small business concern--

(1) That is at least 51 percent owned by one or more women, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern, a veteran-owned small business concern, a service-disabled veteran-owned small business concern, a HUBZone small business concern, a small disadvantaged business concern, or a women-owned small business concern.

(End of clause)

#### 52.219-14 LIMITATIONS ON SUBCONTRACTING (DEC 1996)

(a) This clause does not apply to the unrestricted portion of a partial set-aside.

(b) By submission of an offer and execution of a contract, the Offeror/Contractor agrees that in performance of the contract in the case of a contract for--

(1) Services (except construction). At least 50 percent of the cost of contract performance incurred for personnel shall be expended for employees of the concern.

(2) Supplies (other than procurement from a nonmanufacturer of such supplies). The concern shall perform work for at least 50 percent of the cost of manufacturing the supplies, not including the cost of materials.

(3) General construction. The concern will perform at least 15 percent of the cost of the contract, not including the cost of materials, with its own employees.

(4) Construction by special trade contractors. The concern will perform at least 25 percent of the cost of the contract, not including the cost of materials, with its own employees.

#### 52.219-18 NOTIFICATION OF COMPETITION LIMITED TO ELIGIBLE 8(A) CONCERNS (JUN 2003)

(a) Offers are solicited only from small business concerns expressly certified by the Small Business Administration (SBA) for participation in the SBA's 8(a) Program and which meet the following criteria at the time of submission of offer--

(1) The Offeror is in conformance with the 8(a) support limitation set forth in its approved business plan; and

(2) The Offeror is in conformance with the Business Activity Targets set forth in its approved business plan or any remedial action directed by the SBA.

(b) By submission of its offer, the Offeror represents that it meets all of the criteria set forth in paragraph (a) of this clause.

(c) Any award resulting from this solicitation will be made to the Small Business Administration, which will subcontract performance to the successful 8(a) offeror selected through the evaluation criteria set forth in this solicitation.

(d)(1) Agreement. A small business concern submitting an offer in its own name shall furnish, in performing the contract, only end items manufactured or produced by small business concerns in the United States or its outlying areas. If this procurement is processed under simplified **acquisition** procedures and the total amount of this contract does not exceed \$25,000, a small business concern may furnish the product of any domestic firm. This paragraph does not apply to construction or service contracts.

(2) The insert name of SBA's contractor will notify the insert name of contracting agency Contracting Officer in writing immediately upon entering an agreement (either oral or written) to transfer all or part of its stock or other ownership interest to any other party.

(End of clause)

#### 52.222-3 CONVICT LABOR (JUN 2003)

(a) Except as provided in paragraph (b) of this clause, the Contractor shall not employ in the performance of this contract any person undergoing a sentence of imprisonment imposed by any court of a State, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, or the U.S. Virgin Islands.

(b) The Contractor is not prohibited from employing persons--

(1) On parole or probation to work at paid employment during the term of their sentence;

(2) Who have been pardoned or who have served their terms; or

(3) Confined for violation of the laws of any of the States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, or the U.S. Virgin Islands who are authorized to work at paid employment in the community under the laws of such jurisdiction, if--

(i) The worker is paid or is in an approved work training program on a voluntary basis;

(ii) Representatives of local union central bodies or similar labor union organizations have been consulted;

(iii) Such paid employment will not result in the displacement of employed workers, or be applied in skills, crafts, or trades in which there is a surplus of available gainful labor in the locality, or impair existing contracts for services;

(iv) The rates of pay and other conditions of employment will not be less than those paid or provided for work of a similar nature in the locality in which the work is being performed; and

(v) The Attorney General of the United States has certified that the work-release laws or **regulations** of the jurisdiction involved are in conformity with the requirements of Executive Order 11755, as amended by Executive Orders 12608 and 12943.

(End of clause)

52.222-4 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME  
COMPENSATION. (SEP 2000)

(a) Overtime requirements. No Contractor or subcontractor employing laborers or mechanics (see Federal Acquisition Regulation 22.300) shall require or permit them to work over 40 hours in any workweek unless they are paid at least 1 and 1/2 times the basic rate of pay for each hour worked over 40 hours.

(b) Violation; liability for unpaid wages; liquidated damages. The responsible Contractor and subcontractor are liable for unpaid wages if they violate the terms in paragraph (a) of this clause. In addition, the Contractor and subcontractor are liable for liquidated damages payable to the Government. The Contracting Officer will assess liquidated damages at the rate of \$10 per affected employee for each calendar day on which the employer required or permitted the employee to work in excess of the standard workweek of 40 hours without paying overtime wages required by the Contract Work Hours and Safety Standards Act.

(c) Withholding for unpaid wages and liquidated damages. The Contracting Officer will withhold from payments due under the contract sufficient funds required to satisfy any Contractor or subcontractor liabilities for unpaid wages and liquidated damages. If amounts withheld under the contract are insufficient to satisfy Contractor or subcontractor liabilities, the Contracting Officer will withhold payments from other Federal or Federally assisted contracts held by the same Contractor that are subject to the Contract Work Hours and Safety Standards Act.

(d) Payrolls and basic records.

(1) The Contractor and its subcontractors shall maintain payrolls and basic payroll records for all laborers and mechanics working on the contract during the contract and shall make them available to the Government until 3 years after contract completion. The records shall contain the name and address of each employee, social security number, labor classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. The records need not duplicate those required for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Davis-Bacon Act.

(2) The Contractor and its subcontractors shall allow authorized representatives of the Contracting Officer or the Department of Labor to inspect, copy, or transcribe records maintained under paragraph (d)(1) of this clause. The Contractor or subcontractor also shall allow authorized representatives of the Contracting Officer or Department of Labor to interview employees in the workplace during working hours.

(e) Subcontracts. The Contractor shall insert the provisions set forth in paragraphs (a) through (d) of this clause in subcontracts exceeding \$100,000 and require subcontractors to include these provisions in any lower tier subcontracts. The Contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the provisions set forth in paragraphs (a) through (d) of this clause.

(End of clause)

## 52.222-6 DAVIS-BACON ACT (FEB 1995)

(a) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (d) of this clause; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such period. Such laborers and mechanics shall be paid not less than the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in the clause entitled Apprentices and Trainees. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (b) of this clause) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(b)(1) The Contracting Officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits therefor only when all the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination.

(ii) The classification is utilized in the area by the construction industry.

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by the Contracting Officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator or an authorized representative will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(3) In the event the Contractor, the laborers or mechanics to be employed in the classification, or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits, where appropriate) determined pursuant to subparagraphs (b)(2) and (b)(3) of this clause shall be paid to all workers performing work in the classification under this contract from the

first day on which work is performed in the classification.

(c) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(d) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; provided, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(End of clause)

#### 52.222-7 WITHHOLDING OF FUNDS (FEB 1988)

The Contracting Officer shall, upon his or her own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same Prime Contractor, or any other Federally assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same Prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(End of clause)

#### 52.222-8 PAYROLLS AND BASIC RECORDS (FEB 1988)

(a) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of 3 years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under paragraph (d) of the clause entitled Davis-Bacon Act, that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(b)(1) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer. The payrolls submitted shall set out accurately and completely all of the

information required to be maintained under paragraph (a) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify--

(i) That the payroll for the payroll period contains the information required to be maintained under paragraph (a) of this clause and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR Part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph (b)(2) of this clause.

(4) The falsification of any of the certifications in this clause may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(c) The Contractor or subcontractor shall make the records required under paragraph (a) of this clause available for inspection, copying, or transcription by the Contracting Officer or authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit the Contracting Officer or representatives of the Contracting Officer or the Department of Labor to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit required records or to make them available, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(End of clause)

#### 52.222-9 APPRENTICES AND TRAINEES (FEB 1988)

(a) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be paid not less than the applicable wage determination for the classification of work actually performed. In

addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(b) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(c) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

(End of clause)

#### 52.222-10 COMPLIANCE WITH COPELAND ACT REQUIREMENTS (FEB 1988)

The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.

(End of clause)

#### 52.222-11 SUBCONTRACTS (LABOR STANDARDS (FEB 1988)



(a) The Contractor or subcontractor shall insert in any subcontracts the clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act-Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Withholding of Funds, Subcontracts (Labor Standards), Contract Termination-Debarment, Disputes Concerning Labor Standards, Compliance with Davis-Bacon and Related Act Regulations, and Certification of Eligibility, and such other clauses as the Contracting Officer may, by appropriate instructions, require, and also a clause requiring subcontractors to include these clauses in any lower tier subcontracts. The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with all the contract clauses cited in this paragraph.

(b)(1) Within 14 days after award of the contract, the Contractor shall deliver to the Contracting Officer a completed Statement and Acknowledgment Form (SF 1413) for each subcontract, including the subcontractor's signed and dated acknowledgment that the clauses set forth in paragraph (a) of this clause have been included in the subcontract.

(2) Within 14 days after the award of any subsequently awarded subcontract the Contractor shall deliver to the Contracting Officer an updated completed SF 1413 for such additional subcontract.

(End of clause)

#### 52.222-12 CONTRACT TERMINATION--DEBARMENT (FEB 1988)

A breach of the contract clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act--Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Subcontracts (Labor Standards), Compliance with Davis-Bacon and Related Act Regulations, or Certification of Eligibility may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 CFR 5.12.

(End of clause)

#### 52.222-13 COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REGULATIONS (FEB 1988)

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are hereby incorporated by reference in this contract.

(End of clause)

#### 52.222-14 DISPUTES CONCERNING LABOR STANDARDS (FEB 1988)

The United States Department of Labor has set forth in 29 CFR Parts 5, 6, and 7 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(End of clause)

## 52.222-15 CERTIFICATION OF ELIGIBILITY (FEB 1988)

(a) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(2) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(End of clause)

## 52.222-21 PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)

(a) Segregated facilities, as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(b) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

(End of clause)

## 52.222-26 EQUAL OPPORTUNITY (APR 2002)

(a) Definition. United States, as used in this clause, means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with paragraphs (b)(1) through (b)(11) of this clause, except for work performed outside the United States by employees who were not recruited within the United States. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. However, it shall not be a violation of this clause for the Contractor to extend a publicly announced preference in employment to Indians living on or near an Indian reservation, in connection with employment opportunities on or near an Indian reservation, as permitted by 41 CFR 60-1.5.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include,

but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. The Contractor shall also file Standard Form 100 (EEO-1), or any successor form, as prescribed in 41 CFR part 60-1. Unless the Contractor has filed within the 12 months preceding the date of contract award, the Contractor shall, within 30 days after contract award, apply to either the regional Office of Federal Contract Compliance Programs (OFCCP) or the local office of the Equal Employment Opportunity Commission for the necessary forms.

(8) The Contractor shall permit access to its premises, during normal business hours, by the contracting agency or the OFCCP for the purpose of conducting on-site compliance evaluations and complaint investigations. The Contractor shall permit the Government to inspect and copy any books, accounts, records (including computerized records), and other material that may be relevant to the matter under investigation and pertinent to compliance with Executive Order 11246, as amended, and rules and regulations that implement the Executive Order.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended; in the rules, regulations, and orders of the Secretary of Labor; or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraphs (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

(End of clause)

## 52.222-27 AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION (FEB 1999)

(a) Definitions. "Covered area," as used in this clause, means the geographical area described in the solicitation for this contract.

"Deputy Assistant Secretary," as used in this clause, means Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, or a designee.

"Employer's identification number," as used in this clause, means the Federal Social Security number used on the employer's quarterly federal tax return, U.S. Treasury Department Form 941.

"Minority," as used in this clause, means--

(1) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

(2) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands);

(3) Black (all persons having origins in any of the black African racial groups not of Hispanic origin); and

(4) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).

(b) If the Contractor, or a subcontractor at any tier, subcontracts a portion of the work involving any construction trade, each such subcontract in excess of \$10,000 shall include this clause and the Notice containing the goals for minority and female participation stated in the solicitation for this contract.

(c) If the Contractor is participating in a Hometown Plan (41 CFR 60-4) approved by the U.S. Department of Labor in a covered area, either individually or through an association, its affirmative action obligations on all work in the plan area (including goals) shall comply with the plan for those trades that have unions participating in the plan. Contractors must be able to demonstrate participation in, and compliance with, the provisions of the plan. Each Contractor or subcontractor participating in an approved plan is also required to comply with its obligations under the Equal Opportunity clause, and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good-faith performance by other Contractors or subcontractors toward a goal in an approved plan does not excuse any Contractor's or subcontractor's failure to make good-faith efforts to achieve the plan's goals.

(d) The Contractor shall implement the affirmative action procedures in subparagraphs (g)(1) through (16) of this clause. The goals stated in the solicitation for this contract are expressed as percentages of the total hours of employment and training of minority and female utilization that the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for the geographical area where that work is actually performed. The Contractor is expected to make substantially uniform progress toward its goals in each craft.

(e) Neither the terms and conditions of any collective bargaining agreement, nor the failure by a union with which the Contractor has a collective bargaining agreement, to refer minorities or women shall excuse the Contractor's obligations under this clause, Executive Order 11246, as amended, or the regulations thereunder.

(f) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals,

apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

(g) The Contractor shall take affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with this clause shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and implement affirmative action steps at least as extensive as the following:

(1) Ensure a working environment free of harassment, intimidation, and coercion at all sites and in all facilities where the Contractor's employees are assigned to work. The Contractor, if possible, will assign two or more women to each construction project. The Contractor shall ensure that foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at these sites or facilities.

(2) Establish and maintain a current list of sources for minority and female recruitment. Provide written notification to minority and female recruitment sources and community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

(3) Establish and maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant, referrals of minorities or females from unions, recruitment sources, or community organizations, and the action taken with respect to each individual. If an individual was sent to the union hiring hall for referral and not referred back to the Contractor by the union or, if referred back, not employed by the Contractor, this shall be documented in the file, along with whatever additional actions the Contractor may have taken.

(4) Immediately notify the Deputy Assistant Secretary when the union or unions with which the Contractor has a collective bargaining agreement has not referred back to the Contractor a minority or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

(5) Develop on-the-job training opportunities and/or participate in training programs for the area that expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under subparagraph (g)(2) of this clause.

(6) Disseminate the Contractor's equal employment policy by--

(i) Providing notice of the policy to unions and to training, recruitment, and outreach programs, and requesting their cooperation in assisting the Contractor in meeting its contract obligations;

(ii) Including the policy in any policy manual and in collective bargaining agreements;

(iii) Publicizing the policy in the company newspaper, annual report, etc.;

(iv) Reviewing the policy with all management personnel and with all minority and female employees at least once a year; and

(v) Posting the policy on bulletin boards accessible to employees at each location where construction work is performed.

(7) Review, at least annually, the Contractor's equal employment policy and affirmative action obligations with all employees having responsibility for hiring, assignment, layoff, termination, or other employment decisions.

Conduct review of this policy with all on-site supervisory personnel before initiating construction work at a job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(8) Disseminate the Contractor's equal employment policy externally by including it in any advertising in the news media, specifically including minority and female news media. Provide written notification to, and discuss this policy with, other Contractors and subcontractors with which the Contractor does or anticipates doing business.

(9) Direct recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than 1 month before the date for acceptance of applications for apprenticeship or training by any recruitment source, send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

(10) Encourage present minority and female employees to recruit minority persons and women. Where reasonable, provide after-school, summer, and vacation employment to minority and female youth both on the site and in other areas of the Contractor's workforce.

(11) Validate all tests and other selection requirements where required under 41 CFR 60-3.

(12) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities. Encourage these employees to seek or to prepare for, through appropriate training, etc., opportunities for promotion.

(13) Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the Contractor's obligations under this contract are being carried out.

(14) Ensure that all facilities and company activities are nonsegregated except that separate or single-user rest rooms and necessary dressing or sleeping areas shall be provided to assure privacy between the sexes.

(15) Maintain a record of solicitations for subcontracts for minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

(16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's equal employment policy and affirmative action obligations.

(h) The Contractor is encouraged to participate in voluntary associations that may assist in fulfilling one or more of the affirmative action obligations contained in subparagraphs (g)(1) through (16) of this clause. The efforts of a contractor association, joint contractor-union, contractor-community, or similar group of which the contractor is a member and participant may be asserted as fulfilling one or more of its obligations under subparagraphs (g)(1) through (16) of this clause, provided the Contractor--

(1) Actively participates in the group;

(2) Makes every effort to ensure that the group has a positive impact on the employment of minorities and women in the industry;

(3) Ensures that concrete benefits of the program are reflected in the Contractor's minority and female workforce participation;

(4) Makes a good-faith effort to meet its individual goals and timetables; and

(5) Can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

(i) A single goal for minorities and a separate single goal for women shall be established. The Contractor is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and nonminority. Consequently, the Contractor may be in violation of Executive Order 11246, as amended, if a particular group is employed in a substantially disparate manner.

(j) The Contractor shall not use goals or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

(k) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts under Executive Order 11246, as amended.

(l) The Contractor shall carry out such sanctions and penalties for violation of this clause and of the Equal Opportunity clause, including suspension, termination, and cancellation of existing subcontracts, as may be imposed or ordered under Executive Order 11246, as amended, and its implementing regulations, by the OFCCP. Any failure to carry out these sanctions and penalties as ordered shall be a violation of this clause and Executive Order 11246, as amended.

(m) The Contractor in fulfilling its obligations under this clause shall implement affirmative action procedures at least as extensive as those prescribed in paragraph (g) of this clause, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of Executive Order 11246, as amended, the implementing regulations, or this clause, the Deputy Assistant Secretary shall take action as prescribed in 41 CFR 60-4.8.

(n) The Contractor shall designate a responsible official to--

(1) Monitor all employment-related activity to ensure that the Contractor's equal employment policy is being carried out;

(2) Submit reports as may be required by the Government; and

(3) Keep records that shall at least include for each employee the name, address, telephone number, construction trade, union affiliation (if any), employee identification number, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, separate records are not required to be maintained.

Nothing contained herein shall be construed as a limitation upon the application of other laws that establish different standards of compliance or upon the requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

(End of clause)

#### 52.222-35 EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (DEC 2001)

(a) Definitions. As used in this clause--

All employment openings means all positions except executive and top management, those positions that will be filled from within the Contractor's organization, and positions lasting 3 days or less. This term includes full-time employment, temporary employment of more than 3 days duration, and part-time employment.

Executive and top management means any employee--

(1) Whose primary duty consists of the management of the enterprise in which the individual is employed or of a customarily recognized department or subdivision thereof;

(2) Who customarily and regularly directs the work of two or more other employees;

(3) Who has the authority to hire or fire other employees or whose suggestions and recommendations as to the hiring or firing and as to the advancement and promotion or any other change of status of other employees will be given particular weight;

(4) Who customarily and regularly exercises discretionary powers; and

(5) Who does not devote more than 20 percent or, in the case of an employee of a retail or service establishment, who does not devote more than 40 percent of total hours of work in the work week to activities that are not directly and closely related to the performance of the work described in paragraphs (1) through (4) of this definition. This paragraph (5) does not apply in the case of an employee who is in sole charge of an establishment or a physically separated branch establishment, or who owns at least a 20 percent interest in the enterprise in which the individual is employed.

Other eligible veteran means any other veteran who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized.

Positions that will be filled from within the Contractor's organization means employment openings for which the Contractor will give no consideration to persons outside the Contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings the Contractor proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of its organization.

Qualified special disabled veteran means a special disabled veteran who satisfies the requisite skill, experience, education, and other job-related requirements of the employment position such veteran holds or desires, and who, with or without reasonable accommodation, can perform the essential functions of such position.

Special disabled veteran means--

(1) A veteran who is entitled to compensation (or who but for the receipt of military retired pay would be entitled to compensation) under laws administered by the Department of Veterans Affairs for a disability--

(i) Rated at 30 percent or more; or

(ii) Rated at 10 or 20 percent in the case of a veteran who has been determined under 38 U.S.C. 3106 to have a serious employment handicap (i.e., a significant impairment of the veteran's ability to prepare for, obtain, or retain employment consistent with the veteran's abilities, aptitudes, and interests); or

(2) A person who was discharged or released from active duty because of a service-connected disability.

Veteran of the Vietnam era means a person who--

(1) Served on active duty for a period of more than 180 days and was discharged or released from active duty with other than a dishonorable discharge, if any part of such active duty occurred--



(i) In the Republic of Vietnam between February 28, 1961, and May 7, 1975; or

(ii) Between August 5, 1964, and May 7, 1975, in all other cases; or

(2) Was discharged or released from active duty for a service-connected disability if any part of the active duty was performed--

(i) In the Republic of Vietnam between February 28, 1961, and May 7, 1975; or

(ii) Between August 5, 1964, and May 7, 1975, in all other cases.

(b) General. (1) The Contractor shall not discriminate against the individual because the individual is a special disabled veteran, a veteran of the Vietnam era, or other eligible veteran, regarding any position for which the employee or applicant for employment is qualified. The Contractor shall take affirmative action to employ, advance in employment, and otherwise treat qualified special disabled veterans, veterans of the Vietnam era, and other eligible veterans without discrimination based upon their disability or veterans' status in all employment practices such as--

(i) Recruitment, advertising, and job application procedures;

(ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;

(iii) Rate of pay or any other form of compensation and changes in compensation;

(iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

(v) Leaves of absence, sick leave, or any other leave;

(vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;

(vii) Selection and financial support for training, including apprenticeship, and on-the-job training under 38 U.S.C. 3687, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

(viii) Activities sponsored by the Contractor including social or recreational programs; and

(ix) Any other term, condition, or privilege of employment.

(2) The Contractor shall comply with the rules, regulations, and relevant orders of the Secretary of Labor issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended (38 U.S.C. 4211 and 4212).

(c) Listing openings. (1) The Contractor shall immediately list all employment openings that exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract, and including those occurring at an establishment of the Contractor other than the one where the contract is being performed, but excluding those of independently operated corporate affiliates, at an appropriate local public employment service office of the State wherein the opening occurs. Listing employment openings with the U.S. Department of Labor's America's Job Bank shall satisfy the requirement to list jobs with the local employment service office.

(2) The Contractor shall make the listing of employment openings with the local employment service office at least concurrently with using any other recruitment source or effort and shall involve the normal obligations of placing a

bona fide job order, including accepting referrals of veterans and nonveterans. This listing of employment openings does not require hiring any particular job applicant or hiring from any particular group of job applicants and is not intended to relieve the Contractor from any requirements of Executive orders or regulations concerning nondiscrimination in employment.

(3) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State public employment agency in each State where it has establishments of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State agency, it need not advise the State agency of subsequent contracts. The Contractor may advise the State agency when it is no longer bound by this contract clause.

(d) Applicability. This clause does not apply to the listing of employment openings that occur and are filled outside the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, American Samoa, Guam, the Virgin Islands of the United States, and Wake Island.

(e) Postings. (1) The Contractor shall post employment notices in conspicuous places that are available to employees and applicants for employment.

(2) The employment notices shall--

(i) State the rights of applicants and employees as well as the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants who are special disabled veterans, veterans of the Vietnam era, and other eligible veterans; and

(ii) Be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, Department of Labor (Deputy Assistant Secretary of Labor), and provided by or through the Contracting Officer.

(3) The Contractor shall ensure that applicants or employees who are special disabled veterans are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled veteran, or may lower the posted notice so that it can be read by a person in a wheelchair).

(4) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement, or other contract understanding, that the Contractor is bound by the terms of the Act and is committed to take affirmative action to employ, and advance in employment, qualified special disabled veterans, veterans of the Vietnam era, and other eligible veterans.

(f) Noncompliance. If the Contractor does not comply with the requirements of this clause, the Government may take appropriate actions under the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(g) Subcontracts. The Contractor shall insert the terms of this clause in all subcontracts or purchase orders of \$25,000 or more unless exempted by rules, regulations, or orders of the Secretary of Labor. The Contractor shall act as specified by the Deputy Assistant Secretary of Labor to enforce the terms, including action for noncompliance.

(End of clause)

#### 52.222-36 AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)

(a) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental disability. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified

individuals with disabilities without discrimination based upon their physical or mental disability in all employment practices such as--

- (i) Recruitment, advertising, and job application procedures;
- (ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;
- (iii) Rates of pay or any other form of compensation and changes in compensation;
- (iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
- (v) Leaves of absence, sick leave, or any other leave;
- (vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;
- (vii) Selection and financial support for training, including apprenticeships, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;
- (viii) Activities sponsored by the Contractor, including social or recreational programs; and
- (ix) Any other term, condition, or privilege of employment.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 U.S.C. 793) (the Act), as amended.

(b) Postings. (1) The Contractor agrees to post employment notices stating--

(i) The Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified individuals with disabilities; and

(ii) The rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. The Contractor shall ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair). The notices shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance of the U.S. Department of Labor (Deputy Assistant Secretary) and shall be provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is committed to take affirmative action to employ, and advance in employment, qualified individuals with physical or mental disabilities.

(c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of \$10,000 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

(End of clause)

52.222-37 EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (DEC 2001)

(a) Unless the Contractor is a State or local government agency, the Contractor shall report at least annually, as required by the Secretary of Labor, on--

(1) The number of disabled veterans and the number of veterans of the Vietnam era in the workforce of the contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."

(c) Reports shall be submitted no later than September 30 of each year beginning September 30, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period January through March 1st of the year the report is due, or (2) as of December 31, if the contractor has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each Contractor subject to the reporting requirements at 38 U.S.C. 4212 shall invite all disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 4212 to identify themselves to the Contractor. The invitation shall state that the information is voluntarily provided; that the information will be kept confidential; that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment; and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 4212.

(f) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

(End of clause)

52.222-39 NOTIFICATION OF EMPLOYEE RIGHTS CONCERNING PAYMENT OF UNION DUES OR FEES (DEC 2004)

(a) Definition. As used in this clause--

United States means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) Except as provided in paragraph (e) of this clause, during the term of this contract, the Contractor shall post a notice, in the form of a poster, informing employees of their rights concerning union membership and payment of union dues and fees, in conspicuous places in and about all its plants and offices, including all places where notices to employees are customarily posted. The notice shall include the following information (except that the information

pertaining to National Labor Relations Board shall not be included in notices posted in the plants or offices of carriers subject to the Railway Labor Act, as amended (45 U.S.C. 151-188)).

#### Notice to Employees

Under Federal law, employees cannot be required to join a union or maintain membership in a union in order to retain their jobs. Under certain conditions, the law permits a union and an employer to enter into a union-security agreement requiring employees to pay uniform periodic dues and initiation fees. However, employees who are not union members can object to the use of their payments for certain purposes and can only be required to pay their share of union costs relating to collective bargaining, contract administration, and grievance adjustment.

If you do not want to pay that portion of dues or fees used to support activities not related to collective bargaining, contract administration, or grievance adjustment, you are entitled to an appropriate reduction in your payment. If you believe that you have been required to pay dues or fees used in part to support activities not related to collective bargaining, contract administration, or grievance adjustment, you may be entitled to a refund and to an appropriate reduction in future payments.

For further information concerning your rights, you may wish to contact the National Labor Relations Board (NLRB) either at one of its Regional offices or at the following address or toll free number:

National Labor Relations Board  
Division of Information  
1099 14th Street, N.W.  
Washington, DC 20570  
1-866-667-6572  
1-866-316-6572 (TTY)

To locate the nearest NLRB office, see NLRB's website at <http://www.nlr.gov>.

(c) The Contractor shall comply with all provisions of Executive Order 13201 of February 17, 2001, and related implementing regulations at 29 CFR part 470, and orders of the Secretary of Labor.

(d) In the event that the Contractor does not comply with any of the requirements set forth in paragraphs (b), (c), or (g), the Secretary may direct that this contract be cancelled, terminated, or suspended in whole or in part, and declare the Contractor ineligible for further Government contracts in accordance with procedures at 29 CFR part 470, Subpart B--Compliance Evaluations, Complaint Investigations and Enforcement Procedures. Such other sanctions or remedies may be imposed as are provided by 29 CFR part 470, which implements Executive Order 13201, or as are otherwise provided by law.

(e) The requirement to post the employee notice in paragraph (b) does not apply to--

- (1) Contractors and subcontractors that employ fewer than 15 persons;
- (2) Contractor establishments or construction work sites where no union has been formally recognized by the Contractor or certified as the exclusive bargaining representative of the Contractor's employees;
- (3) Contractor establishments or construction work sites located in a jurisdiction named in the definition of the United States in which the law of that jurisdiction forbids enforcement of union-security agreements;
- (4) Contractor facilities where upon the written request of the Contractor, the Department of Labor Deputy Assistant Secretary for Labor-Management Programs has waived the posting requirements with respect to any of the Contractor's facilities if the Deputy Assistant Secretary finds that the Contractor has demonstrated that--

(i) The facility is in all respects separate and distinct from activities of the Contractor related to the performance of a contract; and

(ii) Such a waiver will not interfere with or impede the effectuation of the Executive order; or

(5) Work outside the United States that does not involve the recruitment or employment of workers within the United States.

(f) The Department of Labor publishes the official employee notice in two variations; one for contractors covered by the Railway Labor Act and a second for all other contractors. The Contractor shall--

(1) Obtain the required employee notice poster from the Division of Interpretations and Standards, Office of Labor-Management Standards, U.S. Department of Labor, 200 Constitution Avenue, NW, Room N-5605, Washington, DC 20210, or from any field office of the Department's Office of Labor-Management Standards or Office of Federal Contract Compliance Programs;

(2) Download a copy of the poster from the Office of Labor-Management Standards website at <http://www.olms.dol.gov>; or

(3) Reproduce and use exact duplicate copies of the Department of Labor's official poster.

(g) The Contractor shall include the substance of this clause in every subcontract or purchase order that exceeds the simplified acquisition threshold, entered into in connection with this contract, unless exempted by the Department of Labor Deputy Assistant Secretary for Labor-Management Programs on account of special circumstances in the national interest under authority of 29 CFR 470.3(c). For indefinite quantity subcontracts, the Contractor shall include the substance of this clause if the value of orders in any calendar year of the subcontract is expected to exceed the simplified acquisition threshold. Pursuant to 29 CFR part 470, Subpart B--Compliance Evaluations, Complaint Investigations and Enforcement Procedures, the Secretary of Labor may direct the Contractor to take such action in the enforcement of these regulations, including the imposition of sanctions for noncompliance with respect to any such subcontract or purchase order. If the Contractor becomes involved in litigation with a subcontractor or vendor, or is threatened with such involvement, as a result of such direction, the Contractor may request the United States, through the Secretary of Labor, to enter into such litigation to protect the interests of the United States.

(End of clause)

#### 52.223-5 POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (AUG 2003)

(a) Definitions. As used in this clause--

Priority chemical means a chemical identified by the Interagency Environmental Leadership Workgroup or, alternatively, by an agency pursuant to section 503 of Executive Order 13148 of April 21, 2000, Greening the Government through Leadership in Environmental Management.

"Toxic chemical means a chemical or chemical category listed in 40 CFR 372.65."

(b) Executive Order 13148 requires Federal facilities to comply with the provisions of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11001-11050) and the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13101-13109).

(c) The Contractor shall provide all information needed by the Federal facility to comply with the following:

- (1) The emergency planning reporting requirements of section 302 of EPCRA.
  - (2) The emergency notice requirements of section 304 of EPCRA.
  - (3) The list of Material Safety Data Sheets, required by section 311 of EPCRA.
  - (4) The emergency and hazardous chemical inventory forms of section 312 of EPCRA.
  - (5) The toxic chemical release inventory of section 313 of EPCRA, which includes the reduction and recycling information required by section 6607 of PPA.
  - (6) The toxic chemical, priority chemical, and hazardous substance release and use reduction goals of sections 502 and 503 of Executive Order 13148.
- (End of clause)

#### 52.223-6 DRUG-FREE WORKPLACE (MAY 2001)

(a) Definitions. As used in this clause --

"Controlled substance" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession, or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) The Contractor, if other than an individual, shall-- within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration), or as soon as possible for contracts of less than 30 days performance duration--

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about--

(i) The dangers of drug abuse in the workplace;

- (ii) The Contractor's policy of maintaining a drug-free workplace;
  - (iii) Any available drug counseling, rehabilitation, and employee assistance programs; and
  - (iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- (3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;
- (4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will--
- (i) Abide by the terms of the statement; and
  - (ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.
- (5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;
- (6) Within 30 days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:
- (i) Taking appropriate personnel action against such employee, up to and including termination; or
  - (ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency; and
- (7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this clause.
- (c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.
- (d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.
- (End of clause)

#### 52.223-14 TOXIC CHEMICAL RELEASE REPORTING (AUG 2003)

- (a) Unless otherwise exempt, the Contractor, as owner or operator of a facility used in the performance of this contract, shall file by July 1 for the prior calendar year an annual Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023(a) and (g)), and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106). The Contractor shall file, for each facility subject to the Form R filing and reporting requirements, the annual Form R throughout the life of the contract.



(b) A Contractor-owned or -operated facility used in the performance of this contract is exempt from the requirement to file an annual Form R if--

- (1) The facility does not manufacture, process, or otherwise use any toxic chemicals listed in 40 CFR 372.65;
- (2) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);
- (3) The facility does not meet the reporting thresholds of toxic chemicals established under of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);
- (4) The facility does not fall within the following Standard Industrial Classification (SIC) codes or their corresponding North American Industry Classification System sectors:
  - (i) Major group code 10 (except 1011, 1081, and 1094.
  - (ii) Major group code 12 (except 1241).
  - (iii) Major group codes 20 through 39.
  - (iv) Industry code 4911, 4931, or 4939 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce).
  - (v) Industry code 4953 (limited to facilities regulated under the Resource Conservation and Recovery Act, Subtitle C (42 U.S.C. 6921, et seq.)), 5169, 5171, or 7389 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis); or
- (5) The facility is not located in the United States or its outlying areas.

(c) If the Contractor has certified to an exemption in accordance with one or more of the criteria in paragraph (b) of this clause, and after award of the contract circumstances change so that any of its owned or operated facilities used in the performance of this contract is no longer exempt--

- (1) The Contractor shall notify the Contracting Officer; and
  - (2) The Contractor, as owner or operator of a facility used in the performance of this contract that is no longer exempt, shall (i) submit a Toxic Chemical Release Inventory Form (Form R) on or before July 1 for the prior calendar year during which the facility becomes eligible; and (ii) continue to file the annual Form R for the life of the contract for such facility.
- (d) The Contracting Officer may terminate this contract or take other action as appropriate, if the Contractor fails to comply accurately and fully with the EPCRA and PPA toxic chemical release filing and reporting requirements.
- (e) Except for acquisitions of commercial items, as defined in FAR Part 2, the Contractor shall--
- (1) For competitive subcontracts expected to exceed \$100,000 (including all options), include a solicitation provision substantially the same as the provision at FAR 52.223-13, Certification of Toxic Chemical Release Reporting; and
  - (2) Include in any resultant subcontract exceeding \$100,000 (including all options), the substance of this clause, except this paragraph (e).

(End of clause)

## 52.225-9 BUY AMERICAN ACT—CONSTRUCTION MATERIALS (JAN 2005)

(a) Definitions. As used in this clause--

Component means an article, material, or supply incorporated directly into a construction material.

Construction material means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

Cost of components means--

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.

Domestic construction material means--

(1) An unmanufactured construction material mined or produced in the United States; or

(2) A construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

Foreign construction material means a construction material other than a domestic construction material.

United States means the 50 States, the District of Columbia, and outlying areas.

(b) Domestic preference. (1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) by providing a preference for domestic construction material. The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to the construction material or components listed by the Government as follows: None

(3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American Act. (1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including--

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American Act applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American Act applies, use of foreign construction material is noncompliant with the Buy American Act.

(d) Data. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

| Construction material description | Unit of measure | Quantity | Price (dollars) \1\ |
|-----------------------------------|-----------------|----------|---------------------|
|-----------------------------------|-----------------|----------|---------------------|

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Item 1

Foreign construction material....

Domestic construction material...

## Item 2

Foreign construction material....

Domestic construction material...

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Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).

List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.

Include other applicable supporting information.

(End of clause)

## 52.225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (DEC 2003)

(a) Except as authorized by the Office of Foreign Assets Control (OFAC) in the Department of the Treasury, the Contractor shall not acquire, for use in the performance of this contract, any supplies or services if any proclamation, Executive order, or statute administered by OFAC, or if OFAC's implementing regulations at 31 CFR chapter V, would prohibit such a transaction by a person subject to the jurisdiction of the United States.

(b) Except as authorized by OFAC, most transactions involving Cuba, Iran, Libya, and Sudan are prohibited, as are most imports from North Korea, into the United States or its outlying areas. Lists of entities and individuals subject to economic sanctions are included in OFAC's List of Specially Designated Nationals and Blocked Persons at TerList1.html. More information about these restrictions, as well as updates, is available in the OFAC's regulations at 31 CFR chapter V and/or on OFAC's Web site at <http://epls.arnet.gov/News.html>.

(c) The Contractor shall insert this clause, including this paragraph (c), in all subcontracts.

(End of clause)

## 52.227-1 AUTHORIZATION AND CONSENT (JUL 1995)

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and

materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold (however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.)

(End of clause)

52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (AUG 1996)

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(3) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at (FAR) 2.101 to exceed the dollar amount set forth in 13.000 of the Federal Acquisition Regulation (FAR).

(End of clause)

52.227-4 PATENT INDEMNITY--CONSTRUCTION CONTRACTS (APR 1984)

Except as otherwise provided, the Contractor agrees to indemnify the Government and its officers, agents, and employees against liability, including costs and expenses, for infringement upon any United States patent (except a patent issued upon an application that is now or may hereafter be withheld from issue pursuant to a Secrecy Order under 35 U.S.C. 181) arising out of performing this contract or out of the use or disposal by or for the account of the Government of supplies furnished or work performed under this contract.

(End of clause)

52.228-1 BID GUARANTEE (SEP 1996)

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.-

(c) The amount of the bid guarantee shall be twenty percent (20%) of the bid price or \$3,000,000., whichever is less.-

(d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.-

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

(End of clause)

#### 52.228-2 ADDITIONAL BOND SECURITY (OCT 1997)

The Contractor shall promptly furnish additional security required to protect the Government and persons supplying labor or materials under this contract if--

(a) Any surety upon any bond, or issuing financial institution for other security, furnished with this contract becomes unacceptable to the Government.

(b) Any surety fails to furnish reports on its financial condition as required by the Government;

(c) The contract price is increased so that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer; or

(d) An irrevocable letter of credit (ILC) used as security will expire before the end of the period of required security. If the Contractor does not furnish an acceptable extension or replacement ILC, or other acceptable substitute, at least 30 days before an ILC's scheduled expiration, the Contracting officer has the right to immediately draw on the ILC.

(End of clause)

#### 52.228-5 INSURANCE--WORK ON A GOVERNMENT INSTALLATION (JAN 1997)

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.

(b) Before commencing work under this contract, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective (1) for such period as the laws of the State in which this contract is to be performed prescribe, or (2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

(End of clause)

52.228-11 PLEDGES OF ASSETS (FEB 1992)

(a) Offerors shall obtain from each person acting as an individual surety on a bid guarantee, a performance bond, or a payment bond--

(1) Pledge of assets; and

(2) Standard Form 28, Affidavit of Individual Surety.

(b) Pledges of assets from each person acting as an individual surety shall be in the form of--

(1) Evidence of an escrow account containing cash, certificates of deposit, commercial or Government securities, or other assets described in FAR 28.203-2 (except see 28.203-2(b)(2) with respect to Government securities held in book entry form) and/or;

(2) A recorded lien on real estate. The offeror will be required to provide--

(i) Evidence of title in the form of a certificate of title prepared by a title insurance company approved by the United States Department of Justice. This title evidence must show fee simple title vested in the surety along with any concurrent owners; whether any real estate taxes are due and payable; and any recorded encumbrances against the property, including the lien filed in favor of the Government as required by FAR 28.203-3(d);

(ii) Evidence of the amount due under any encumbrance shown in the evidence of title;

(iii) A copy of the current real estate tax assessment of the property or a current appraisal dated no earlier than 6 months prior to the date of the bond, prepared by a professional appraiser who certifies that the appraisal has been conducted in accordance with the generally accepted appraisal standards as reflected in the Uniform Standards of Professional Appraisal Practice, as promulgated by the Appraisal Foundation.

(End of clause)

52.228-12 PROSPECTIVE SUBCONTRACTOR REQUESTS FOR BONDS. (OCT 1995)

In accordance with Section 806(a)(3) of Pub. L. 102-190, as amended by Sections 2091 and 8105 of Pub. L. 103-355, upon the request of a prospective subcontractor or supplier offering to furnish labor or material for the performance of this contract for which a payment bond has been furnished to the Government pursuant to the Miller Act, the Contractor shall promptly provide a copy of such payment bond to the requester.

(End of clause)

52.228-14 IRREVOCABLE LETTER OF CREDIT (DEC 1999)

(a) "Irrevocable letter of credit" (ILC), as used in this clause, means a written commitment by a federally insured financial institution to pay all or part of a stated amount of money, until the expiration date of the letter, upon presentation by the Government (the beneficiary) of a written demand therefor. Neither the financial institution nor the offeror/Contractor can revoke or condition the letter of credit.

(b) If the offeror intends to use an ILC in lieu of a bid bond, or to secure other types of bonds such as performance and payment bonds, the letter of credit and letter of confirmation formats in paragraphs (e) and (f) of this clause shall be used.

(c) The letter of credit shall be irrevocable, shall require presentation of no document other than a written demand and the ILC (including confirming letter, if any), shall be issued/confirmed by an acceptable federally insured financial institution as provided in paragraph (d) of this clause, and--

(1) If used as a bid guarantee, the ILC shall expire no earlier than 60 days after the close of the bid acceptance period;

(2) If used as an alternative to corporate or individual sureties as security for a performance or payment bond, the offeror/Contractor may submit an ILC with an initial expiration date estimated to cover the entire period for which financial security is required or may submit an ILC with an initial expiration date that is a minimum period of one year from the date of issuance. The ILC shall provide that, unless the issuer provides the beneficiary written notice of non-renewal at least 60 days in advance of the current expiration date, the ILC is automatically extended without amendment for one year from the expiration date, or any future expiration date, until the period of required coverage is completed and the Contracting Officer provides the financial institution with a written statement waiving the right to payment. The period of required coverage shall be:

(i) For contracts subject to the Miller Act, the later of--

(A) One year following the expected date of final payment;

(B) For performance bonds only, until completion of any warranty period; or

(C) For payment bonds only, until resolution of all claims filed against the payment bond during the one-year period following final payment.

(ii) For contracts not subject to the Miller Act, the later of--

(A) 90 days following final payment; or

(B) For performance bonds only, until completion of any warranty period.

(d) Only federally insured financial institutions rated investment grade or higher shall issue or confirm the ILC. The offeror/Contractor shall provide the Contracting Officer a credit rating that indicates the financial institution has the required rating(s) as of the date of issuance of the ILC. Unless the financial institution issuing the ILC had letter of credit business of less than \$25 million in the past year, ILCs over \$5 million must be confirmed by another acceptable financial institution that had letter of credit business of less than \$25 million in the past year.

(e) The following format shall be used by the issuing financial institution to create an ILC:

---

[Issuing Financial Institution's Letterhead or Name and Address]

Issue Date \_\_\_\_\_

IRREVOCABLE LETTER OF CREDIT NO. \_\_\_\_\_

Account party's name \_\_\_\_\_

Account party's address \_\_\_\_\_



For Solicitation No. \_\_\_\_\_ (for reference only)

TO: [U.S. Government agency]

[U.S. Government agency's address]

1. We hereby establish this irrevocable and transferable Letter of Credit in your favor for one or more drawings up to United States \$ \_\_\_\_\_. This Letter of Credit is payable at [issuing financial institution's and, if any, confirming financial institution's] office at [issuing financial institution's address and, if any, confirming financial institution's address] and expires with our close of business on \_\_\_\_\_, or any automatically extended expiration date.

2. We hereby undertake to honor your or the transferee's sight draft(s) drawn on the issuing or, if any, the confirming financial institution, for all or any part of this credit if presented with this Letter of Credit and confirmation, if any, at the office specified in paragraph 1 of this Letter of Credit on or before the expiration date or any automatically extended expiration date.

3. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this Letter of Credit that it is deemed to be automatically extended without amendment for one year from the expiration date hereof, or any future expiration date, unless at least 60 days prior to any expiration date, we notify you or the transferee by registered mail, or other receipted means of delivery, that we elect not to consider this Letter of Credit renewed for any such additional period. At the time we notify you, we also agree to notify the account party (and confirming financial institution, if any) by the same means of delivery.

4. This Letter of Credit is transferable. Transfers and assignments of proceeds are to be effected without charge to either the beneficiary or the transferee/assignee of proceeds. Such transfer or assignment shall be only at the written direction of the Government (the beneficiary) in a form satisfactory to the issuing financial institution and the confirming financial institution, if any.

5. This Letter of Credit is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of \_\_\_\_\_ [state of confirming financial institution, if any, otherwise state of issuing financial institution].

6. If this credit expires during an interruption of business of this financial institution as described in Article 17 of the UCP, the financial institution specifically agrees to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

\_\_\_\_\_

[Issuing financial institution]

(f) The following format shall be used by the financial institution to confirm an ILC:

\_\_\_\_\_  
[Confirming Financial Institution's Letterhead or Name and Address]

(Date) \_\_\_\_\_

Our Letter of Credit Advice Number \_\_\_\_\_

Beneficiary: \_\_\_\_\_ [U.S. Government agency]

Issuing Financial Institution: \_\_\_\_\_

Issuing Financial Institution's LC No.: \_\_\_\_\_

Gentlemen:

1. We hereby confirm the above indicated Letter of Credit, the original of which is attached, issued by \_\_\_\_\_ [name of issuing financial institution] for drawings of up to United States dollars \_\_\_\_\_/U.S. \$\_\_\_\_\_ and expiring with our close of business on \_\_\_\_\_ [the expiration date], or any automatically extended expiration date.

2. Draft(s) drawn under the Letter of Credit and this Confirmation are payable at our office located at \_\_\_\_\_.

3. We hereby undertake to honor sight draft(s) drawn under and presented with the Letter of Credit and this Confirmation at our offices as specified herein.

4. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this confirmation that it be deemed automatically extended without amendment for one year from the expiration date hereof, or any automatically extended expiration date, unless:

(a) At least 60 days prior to any such expiration date, we shall notify the Contracting Officer, or the transferee and the issuing financial institution, by registered mail or other receipted means of delivery, that we elect not to consider this confirmation extended for any such additional period; or

(b) The issuing financial institution shall have exercised its right to notify you or the transferee, the account party, and ourselves, of its election not to extend the expiration date of the Letter of Credit.

5. This confirmation is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of \_\_\_\_\_ [state of confirming financial institution].

6. If this confirmation expires during an interruption of business of this financial institution as described in Article 17 of the UCP, we specifically agree to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

\_\_\_\_\_

[Confirming financial institution]

(g) The following format shall be used by the Contracting Officer for a sight draft to draw on the Letter of Credit:

**SIGHT DRAFT**

\_\_\_\_\_

[City, State]

(Date) \_\_\_\_\_

[Name and address of financial institution]

Pay to the order of \_\_\_\_\_ [Beneficiary Agency] \_\_\_\_\_ the sum of United States \$ \_\_\_\_\_.  
This draft is drawn under Irrevocable Letter of Credit No. \_\_\_\_\_.

\_\_\_\_\_  
[Beneficiary Agency]

By: \_\_\_\_\_

(End of clause)

52.228-15 PERFORMANCE AND PAYMENT BONDS--CONSTRUCTION (JUL 2000)-

(a) Definitions. As used in this clause--

Original contract price means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) Amount of required bonds. Unless the resulting contract price is \$100,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance bonds (Standard Form 25). The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.

(2) Payment Bonds (Standard Form 25-A). The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

(3) Additional bond protection. (i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.

(ii) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) Furnishing executed bonds. The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) Surety or other security for bonds. The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register or may be obtained from the U.S. Department of Treasury, Financial Management Service, Surety Bond Branch, 401 14th Street, NW, 2nd Floor, West Wing, Washington, DC 20227.

(e) Notice of subcontractor waiver of protection (40 U.S.C. 270b(c)). Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

(End of clause)

## 52.229-3 FEDERAL, STATE, AND LOCAL TAXES (APR 2003)

(a) As used in this clause--

"Contract date" means the date set for bid opening or, if this is a negotiated contract or a modification, the effective date of this contract or modification.

"All applicable Federal, State, and local taxes and duties" means all taxes and duties, in effect on the contract date, that the taxing authority is imposing and collecting on the transactions or property covered by this contract.

"After-imposed Federal tax" means any new or increased Federal excise tax or duty, or tax that was exempted or excluded on the contract date but whose exemption was later revoked or reduced during the contract period, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date. It does not include social security tax or other employment taxes.

"After-relieved Federal tax" means any amount of Federal excise tax or duty, except social security or other employment taxes, that would otherwise have been payable on the transactions or property covered by this contract, but which the Contractor is not required to pay or bear, or for which the Contractor obtains a refund or drawback, as the result of legislative, judicial, or administrative action taking effect after the contract date.

Local taxes includes taxes imposed by a possession or territory of the United States, Puerto Rico, or the Northern Mariana Islands, if the contract is performed wholly or partly in any of those areas.

(b) The contract price includes all applicable Federal, State, and local taxes and duties.

(c) The contract price shall be increased by the amount of any after-imposed Federal tax, provided the Contractor warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price, as a contingency reserve or otherwise.

(d) The contract price shall be decreased by the amount of any after-relieved Federal tax.

(e) The contract price shall be decreased by the amount of any Federal excise tax or duty, except social security or other employment taxes, that the Contractor is required to pay or bear, or does not obtain a refund of, through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.

(f) No adjustment shall be made in the contract price under this clause unless the amount of the adjustment exceeds \$250.

(g) The Contractor shall promptly notify the Contracting Officer of all matters relating to any Federal excise tax or duty that reasonably may be expected to result in either an increase or decrease in the contract price and shall take appropriate action as the Contracting Officer directs.

(h) The Government shall, without liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax when the Contractor requests such evidence and a reasonable basis exists to sustain the exemption.

(End of clause)

## 52.232-5 PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS (SEP 2002)

- (a) Payment of price. The Government shall pay the Contractor the contract price as provided in this contract.
- (b) Progress payments. The Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer.
- (1) The Contractor's request for progress payments shall include the following substantiation:
- (i) An itemization of the amounts requested, related to the various elements of work required by the contract covered by the payment requested.
  - (ii) A listing of the amount included for work performed by each subcontractor under the contract.
  - (iii) A listing of the total amount of each subcontract under the contract.
  - (iv) A listing of the amounts previously paid to each such subcontractor under the contract.
  - (v) Additional supporting data in a form and detail required by the Contracting Officer.
- (2) In the preparation of estimates, the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site also may be taken into consideration if--
- (i) Consideration is specifically authorized by this contract; and
  - (ii) The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.
- (c) Contractor certification. Along with each request for progress payments, the Contractor shall furnish the following certification, or payment shall not be made: (However, if the Contractor elects to delete paragraph (c)(4) from the certification, the certification is still acceptable.)
- I hereby certify, to the best of my knowledge and belief, that--
- (1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;
  - (2) All payments due to subcontractors and suppliers from previous payments received under the contract have been made, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and the requirements of chapter 39 of Title 31, United States Code;
  - (3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract; and
  - (4) This certification is not to be construed as final acceptance of a subcontractor's performance.

---

(Name)

---

(Title)

---

(Date)

(d) Refund of unearned amounts. If the Contractor, after making a certified request for progress payments, discovers that a portion or all of such request constitutes a payment for performance by the Contractor that fails to conform to the specifications, terms, and conditions of this contract (hereinafter referred to as the "unearned amount"), the Contractor shall--

(1) Notify the Contracting Officer of such performance deficiency; and

(2) Be obligated to pay the Government an amount (computed by the Contracting Officer in the manner provided in paragraph (j) of this clause) equal to interest on the unearned amount from the 8th day after the date of receipt of the unearned amount until--

(i) The date the Contractor notifies the Contracting Officer that the performance deficiency has been corrected; or

(ii) The date the Contractor reduces the amount of any subsequent certified request for progress payments by an amount equal to the unearned amount.

(e) Retainage. If the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, the Contracting Officer shall authorize payment to be made in full. However, if satisfactory progress has not been made, the Contracting Officer may retain a maximum of 10 percent of the amount of the payment until satisfactory progress is achieved. When the work is substantially complete, the Contracting Officer may retain from previously withheld funds and future progress payments that amount the Contracting Officer considers adequate for protection of the Government and shall release to the Contractor all the remaining withheld funds. Also, on completion and acceptance of each separate building, public work, or other division of the contract, for which the price is stated separately in the contract, payment shall be made for the completed work without retention of a percentage.

(f) Title, liability, and reservation of rights. All material and work covered by progress payments made shall, at the time of payment, become the sole property of the Government, but this shall not be construed as--

(1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or

(2) Waiving the right of the Government to require the fulfillment of all of the terms of the contract.

(g) Reimbursement for bond premiums. In making these progress payments, the Government shall, upon request, reimburse the Contractor for the amount of premiums paid for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after the Contractor has furnished evidence of full payment to the surety. The retainage provisions in paragraph (e) of this clause shall not apply to that portion of progress payments attributable to bond premiums.

(h) Final payment. The Government shall pay the amount due the Contractor under this contract after--

(1) Completion and acceptance of all work;

(2) Presentation of a properly executed voucher; and

(3) Presentation of release of all claims against the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has

specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).

(i) Limitation because of undefinitized work. Notwithstanding any provision of this contract, progress payments shall not exceed 80 percent on work accomplished on undefinitized contract actions. A "contract action" is any action resulting in a contract, as defined in FAR Subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.

(j) Interest computation on unearned amounts. In accordance with 31 U.S.C. 3903(c)(1), the amount payable under subparagraph (d)(2) of this clause shall be--

(1) Computed at the rate of average bond equivalent rates of 91-day Treasury bills auctioned at the most recent auction of such bills prior to the date the Contractor receives the unearned amount; and

(2) Deducted from the next available payment to the Contractor.

(End of clause)

#### 52.232-17 INTEREST (JUNE 1996)

(a) Except as otherwise provided in this contract under a Price Reduction for Defective Cost or Pricing Data clause or a Cost Accounting Standards clause, all amounts that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code (26 U.S.C. 1481)) shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid. reproduce, prepare derivative works, distribute copies to the public, and (b) Amounts shall be due at the earliest of the following dates:

(1) The date fixed under this contract.

(2) The date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination.

(3) The date the Government transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt.

(4) If this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or a negotiated pricing agreement not confirmed by contract modification.

(c) The interest charge made under this clause may be reduced under the procedures prescribed in 32.614-2 of the Federal Acquisition Regulation in effect on the date of this contract.

(End of clause)

## 52.232-18 AVAILABILITY OF FUNDS (APR 1984)

Funds are not presently available for this contract. The Government's obligation under this contract is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are made available to the Contracting Officer for this contract and until the Contractor receives notice of such availability, to be confirmed in writing by the Contracting Officer.

(End of clause)

## 52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986)

(a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 15 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence.

(b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.

(c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

(End of clause)

## 52.232-27 PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS (OCT 2003)

Notwithstanding any other payment terms in this contract, the Government will make invoice payments under the terms and conditions specified in this clause. The Government considers payment as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in sections 2.101, 32.001, and 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see paragraph (a)(3) concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments--(1) Types of invoice payments. For purposes of this clause, there are several types of invoice payments that may occur under this contract, as follows:

(i) Progress payments, if provided for elsewhere in this contract, based on Contracting Officer approval of the estimated amount and value of work or services performed, including payments for reaching milestones in any project.

(A) The due date for making such payments is 14 days after the designated billing office receives a proper payment request. If the designated billing office fails to annotate the payment request with the actual date of receipt at the time of receipt, the payment due date is the 14th day after the date of the Contractor's payment request, provided the designated billing office receives a proper payment request and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.



(B) The due date for payment of any amounts retained by the Contracting Officer in accordance with the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, is as specified in the contract or, if not specified, 30 days after approval by the Contracting Officer for release to the Contractor.

(ii) Final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (e.g., each separate building, public work, or other division of the contract for which the price is stated separately in the contract).

(A) The due date for making such payments is the later of the following two events:

(1) The 30th day after the designated billing office receives a proper invoice from the Contractor.

(2) The 30th day after Government acceptance of the work or services completed by the Contractor. For a final invoice when the payment amount is subject to contract settlement actions (e.g., release of claims), acceptance is deemed to occur on the effective date of the contract settlement.

(B) If the designated billing office fails to annotate the invoice with the date of actual receipt at the time of receipt, the invoice payment due date is the 30th day after the date of the Contractor's invoice, provided the designated billing office receives a proper invoice and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(2) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in paragraphs (a)(2)(i) through (a)(2)(xi) of this clause. If the invoice does not comply with these requirements, the designated billing office must return it within 7 days after receipt, with the reasons why it is not a proper invoice. When computing any interest penalty owed the Contractor, the Government will take into account if the Government notifies the Contractor of an improper invoice in an untimely manner.

(i) Name and address of the Contractor.

(ii) Invoice date and invoice number. (The Contractor should date invoices as close as possible to the date of mailing or transmission.)

(iii) Contract number or other authorization for work or services performed (including order number and contract line item number).

(iv) Description of work or services performed.

(v) Delivery and payment terms (e.g., discount for prompt payment terms).

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to notify in the event of a defective invoice.

(viii) For payments described in paragraph (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts.

(ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision (e.g., 52.232-38, Submission of Electronic Funds Transfer Information with Offer), contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(xi) Any other information or documentation required by the contract.

(3) Interest penalty. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if payment is not made by the due date and the conditions listed in paragraphs (a)(3)(i) through (a)(3)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday, the designated payment office may make payment on the following working day without incurring a late payment interest penalty.

(i) The designated billing office received a proper invoice.

(ii) The Government processed a receiving report or other Government documentation authorizing payment and there was no disagreement over quantity, quality, Contractor compliance with any contract term or condition, or requested progress payment amount.

(iii) In the case of a final invoice for any balance of funds due the Contractor for work or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(4) Computing penalty amount. The Government will compute the interest penalty in accordance with the Office of Management and Budget prompt payment regulations at 5 CFR part 1315.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor for payments described in paragraph (a)(1)(ii) of this clause, Government acceptance or approval is deemed to occur constructively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. If actual acceptance or approval occurs within the constructive acceptance or approval period, the Government will base the determination of an interest penalty on the actual date of acceptance or approval. Constructive acceptance or constructive approval requirements do not apply if there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. These requirements also do not compel Government officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The prompt payment regulations at 5 CFR 1315.10(c) do not require the Government to pay interest penalties if payment delays are due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. The Government and the Contractor shall resolve claims involving disputes, and any interest that may be payable in accordance with the clause at FAR 52.233-1, Disputes.

(5) Discounts for prompt payment. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if the Government takes a discount for prompt payment improperly. The Government will calculate the interest penalty in accordance with the prompt payment regulations at 5 CFR part 1315.

(6) Additional interest penalty. (i) The designated payment office will pay a penalty amount, calculated in accordance with the prompt payment regulations at 5 CFR part 1315 in addition to the interest penalty amount only if--

(A) The Government owes an interest penalty of \$1 or more;

(B) The designated payment office does not pay the interest penalty within 10 days after the date the invoice amount is paid; and

(C) The Contractor makes a written demand to the designated payment office for additional penalty payment, in accordance with paragraph (a)(6)(ii) of this clause, postmarked not later than 40 days after the date the invoice amount is paid.

(ii)(A) The Contractor shall support written demands for additional penalty payments with the following data. The Government will not request any additional data. The Contractor shall--

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) If there is no postmark or the postmark is illegible--

(1) The designated payment office that receives the demand will annotate it with the date of receipt provided the demand is received on or before the 40th day after payment was made; or

(2) If the designated payment office fails to make the required annotation, the Government will determine the demand's validity based on the date the Contractor has placed on the demand, provided such date is no later than the 40th day after payment was made.

(b) Contract financing payments. If this contract provides for contract financing, the Government will make contract financing payments in accordance with the applicable contract financing clause.

(c) Subcontract clause requirements. The Contractor shall include in each subcontract for property or services (including a material supplier) for the purpose of performing this contract the following:

(1) Prompt payment for subcontractors. A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the Contractor under this contract.

(2) Interest for subcontractors. An interest penalty clause that obligates the Contractor to pay to the subcontractor an interest penalty for each payment not made in accordance with the payment clause--

(i) For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(ii) Computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(3) Subcontractor clause flowdown. A clause requiring each subcontractor to use:

(i) Include a payment clause and an interest penalty clause conforming to the standards set forth in paragraphs (c)(1) and (c)(2) of this clause in each of its subcontracts; and

(ii) Require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

(d) Subcontract clause interpretation. The clauses required by paragraph (c) of this clause shall not be construed to impair the right of the Contractor or a subcontractor at any tier to negotiate, and to include in their subcontract, provisions that--

(1) Retainage permitted. Permit the Contractor or a subcontractor to retain (without cause) a specified percentage of each progress payment otherwise due to a subcontractor for satisfactory performance under the subcontract without incurring any obligation to pay a late payment interest penalty, in accordance with terms and conditions agreed to by the parties to the subcontract, giving such recognition as the parties deem appropriate to the ability of a subcontractor to furnish a performance bond and a payment bond;

(2) Withholding permitted. Permit the Contractor or subcontractor to make a determination that part or all of the subcontractor's request for payment may be withheld in accordance with the subcontract agreement; and

(3) Withholding requirements. Permit such withholding without incurring any obligation to pay a late payment penalty if--

(i) A notice conforming to the standards of paragraph (g) of this clause previously has been furnished to the subcontractor; and

(ii) The Contractor furnishes to the Contracting Officer a copy of any notice issued by a Contractor pursuant to paragraph (d)(3)(i) of this clause.

(e) Subcontractor withholding procedures. If a Contractor, after making a request for payment to the Government but before making a payment to a subcontractor for the subcontractor's performance covered by the payment request, discovers that all or a portion of the payment otherwise due such subcontractor is subject to withholding from the subcontractor in accordance with the subcontract agreement, then the Contractor shall--

(1) Subcontractor notice. Furnish to the subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon ascertaining the cause giving rise to a withholding, but prior to the due date for subcontractor payment;

(2) Contracting Officer notice. Furnish to the Contracting Officer, as soon as practicable, a copy of the notice furnished to the subcontractor pursuant to paragraph (e)(1) of this clause;

(3) Subcontractor progress payment reduction. Reduce the subcontractor's progress payment by an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (e)(1) of this clause;

(4) Subsequent subcontractor payment. Pay the subcontractor as soon as practicable after the correction of the identified subcontract performance deficiency, and--

(i) Make such payment within--

(A) Seven days after correction of the identified subcontract performance deficiency (unless the funds therefor must be recovered from the Government because of a reduction under paragraph (e)(5)(i)) of this clause; or

(B) Seven days after the Contractor recovers such funds from the Government; or

(ii) Incur an obligation to pay a late payment interest penalty computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty;

(5) Notice to Contracting Officer. Notify the Contracting Officer upon--

(i) Reduction of the amount of any subsequent certified application for payment; or

(ii) Payment to the subcontractor of any withheld amounts of a progress payment, specifying--

(A) The amounts withheld under paragraph (e)(1) of this clause; and

(B) The dates that such withholding began and ended; and

(6) Interest to Government. Be obligated to pay to the Government an amount equal to interest on the withheld payments (computed in the manner provided in 31 U.S.C. 3903(c)(1)), from the 8th day after receipt of the withheld amounts from the Government until--

(i) The day the identified subcontractor performance deficiency is corrected; or

(ii) The date that any subsequent payment is reduced under paragraph (e)(5)(i) of this clause.

(f) Third-party deficiency reports--(1) Withholding from subcontractor. If a Contractor, after making payment to a first-tier subcontractor, receives from a supplier or subcontractor of the first-tier subcontractor (hereafter referred to as a "second-tier subcontractor") a written notice in accordance with section 2 of the Act of August 24, 1935 (40 U.S.C. 270b, Miller Act), asserting a deficiency in such first-tier subcontractor's performance under the contract for which the Contractor may be ultimately liable, and the Contractor determines that all or a portion of future payments otherwise due such first-tier subcontractor is subject to withholding in accordance with the subcontract agreement, the Contractor may, without incurring an obligation to pay an interest penalty under paragraph (e)(6) of this clause--

(i) Furnish to the first-tier subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon making such determination; and

(ii) Withhold from the first-tier subcontractor's next available progress payment or payments an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (f)(1)(i) of this clause.

(2) Subsequent payment or interest charge. As soon as practicable, but not later than 7 days after receipt of satisfactory written notification that the identified subcontract performance deficiency has been corrected, the Contractor shall--

(i) Pay the amount withheld under paragraph (f)(1)(ii) of this clause to such first-tier subcontractor; or

(ii) Incur an obligation to pay a late payment interest penalty to such first-tier subcontractor computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(g) Written notice of subcontractor withholding. The Contractor shall issue a written notice of any withholding to a subcontractor (with a copy furnished to the Contracting Officer), specifying--

(1) The amount to be withheld;

(2) The specific causes for the withholding under the terms of the subcontract; and

(3) The remedial actions to be taken by the subcontractor in order to receive payment of the amounts withheld.

(h) Subcontractor payment entitlement. The Contractor may not request payment from the Government of any amount withheld or retained in accordance with paragraph (d) of this clause until such time as the Contractor has determined and certified to the Contracting Officer that the subcontractor is entitled to the payment of such amount.

(i) Prime-subcontractor disputes. A dispute between the Contractor and subcontractor relating to the amount or entitlement of a subcontractor to a payment or a late payment interest penalty under a clause included in the subcontract pursuant to paragraph (c) of this clause does not constitute a dispute to which the Government is a party. The Government may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

(j) Preservation of prime-subcontractor rights. Except as provided in paragraph (i) of this clause, this clause shall not limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or a subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or nonperformance by a subcontractor.

(k) Non-recourse for prime contractor interest penalty. The Contractor's obligation to pay an interest penalty to a subcontractor pursuant to the clauses included in a subcontract under paragraph (c) of this clause shall not be construed to be an obligation of the Government for such interest penalty. A cost-reimbursement claim may not include any amount for reimbursement of such interest penalty.

(l) Overpayments. If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(End of clause)

#### 52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER—CENTRAL CONTRACTOR REGISTRATION (OCT 2003)

(a) Method of payment. (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT), except as provided in paragraph (a)(2) of this clause. As used in this clause, the term "EFT" refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either--

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend the payment due date until such time as the Government can make payment by EFT (but see paragraph (d) of this clause).

(b) Contractor's EFT information. The Government shall make payment to the Contractor using the EFT information contained in the Central Contractor Registration (CCR) database. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the CCR database.

(c) Mechanisms for EFT payment. The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) Suspension of payment. If the Contractor's EFT information in the CCR database is incorrect, then the Government need not make payment to the Contractor under this contract until correct EFT information is entered into the CCR database; and any invoice or contract financing request shall be deemed not to be a proper invoice for the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(e) Liability for uncompleted or erroneous transfers. (1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor's EFT information incorrectly, the Government remains responsible for--

(i) Making a correct payment;

(ii) Paying any prompt payment penalty due; and

(iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor's EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and--

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government shall not make payment, and the provisions of paragraph (d) of this clause shall apply.

(f) EFT and prompt payment. A payment shall be deemed to have been made in a timely manner in accordance with the prompt payment terms of this contract if, in the EFT payment transaction instruction released to the Federal Reserve System, the date specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(g) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall register separately in the CCR database and shall be paid by EFT in accordance with the terms of this clause. Notwithstanding any other requirement of this contract, payment to an ultimate recipient other than the Contractor, or a financial institution properly recognized under an assignment of claims pursuant to subpart 32.8, is not permitted. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(h) Liability for change of EFT information by financial agent. The Government is not liable for errors resulting from changes to EFT information made by the Contractor's financial agent.

(i) Payment information. The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address contained in the CCR database.

(End of Clause)

## 52.233-1 DISPUTES. (JUL 2002)

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) Claim, as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2)(i) The contractors shall provide the certification specified in subparagraph (d)(2)(iii) of this clause when submitting any claim -

(A) Exceeding \$100,000; or

(B) Regardless of the amount claimed, when using -

(1) Arbitration conducted pursuant to 5 U.S.C. 575-580; or

(2) Any other alternative means of dispute resolution (ADR) technique that the agency elects to handle in accordance with the Administrative Dispute Resolution Act (ADRA).

(ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor.

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented



to the Contractor, the parties, by mutual consent, may agree to use alternative dispute resolution (ADR). If the Contractor refuses an offer for ADR, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the request.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in (FAR) 48 CFR 33.201, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

(End of clause)

#### 52.233-3 PROTEST AFTER AWARD (AUG. 1996)

(a) Upon receipt of a notice of protest (as defined in FAR 33.101) or a determination that a protest is likely (see FAR 33.102(d)), the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protest, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon a proposal at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause.

(f) If, as the result of the Contractor's intentional or negligent misstatement, misrepresentation, or miscertification, a protest related to this contract is sustained, and the Government pays costs, as provided in FAR 33.102(b)(2) or 33.104(h)(1), the Government may require the Contractor to reimburse the Government the amount of such costs. In addition to any other remedy available, and pursuant to the requirements of Subpart 32.6, the Government may collect this debt by offsetting the amount against any payment due the Contractor under any contract between the Contractor and the Government.

(End of clause)

#### 52.236-2 DIFFERING SITE CONDITIONS (APR 1984)

As prescribed in 36.502, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The Contracting Officer may insert the clause in solicitations and contracts when a fixed-price construction or a fixed-price contract for dismantling, demolition, or removal of improvements is contemplated and the contract amount is expected to be within the small purchase limitation.

(a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of

(1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or

(2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

(End of clause)

#### 52.236-3 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984)

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to

(1) conditions bearing upon transportation, disposal, handling, and storage of materials;

(2) the availability of labor, water, electric power, and roads;

(3) uncertainties of weather, river stages, tides, or similar physical conditions at the site;

(4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

(End of clause)

#### 52.236-5 MATERIAL AND WORKMANSHIP (APR 1984)

(a) All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.

(End of clause)

#### 52.236-6 SUPERINTENDENCE BY THE CONTRACTOR (APR 1984)

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall

directly superintend the work or assign and have on the worksite a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.

(End of clause)

#### 52.236-7 PERMITS AND RESPONSIBILITIES (NOV 1991)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

(End of clause)

#### 52.236-8 OTHER CONTRACTS (APR 1984)

The Government may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Government employees.

(End of clause)

#### 52.236-9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS (APR 1984)

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(b) The Contractor shall protect from damage all existing improvements and utilities

(1) at or near the work site, and

(2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

(End of clause)

**52.236-10 OPERATIONS AND STORAGE AREAS (APR 1984)**

(a) The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.

(b) Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Government. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.

(c) The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

(End of clause)

**52.236-11 USE AND POSSESSION PRIOR TO COMPLETION (APR 1984)**

(a) The Government shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the Government has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the Government's possession or use, notwithstanding the terms of the clause in this contract entitled "Permits and Responsibilities." If prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

(End of clause)

**52.236-12 CLEANING UP (APR 1984)**

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Government. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer.

(End of clause)

## 52.236-13 ACCIDENT PREVENTION (NOV 1991) – ALTERNATE I (NOV 1991)

(a) The Contractor shall provide and maintain work environments and procedures which will

(1) safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities;

(2) avoid interruptions of Government operations and delays in project completion dates; and

(3) control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall-

(1) Provide appropriate safety barricades, signs, and signal lights;

(2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and

(3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.

(4) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.

(2) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.

(e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.

(f) Before commencing the work, the Contractor shall-

(1) Submit a written proposed plan for implementing this clause. The plan shall include an analysis of the significant hazards to life, limb, and property inherent in contract work performance and a plan for controlling these hazards; and

(2) Meet with representatives of the Contracting Officer to discuss and develop a mutual understanding relative to administration of the overall safety program.

(End of clause)

**52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)**

(a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

(b) The Contractor shall enter the actual progress on the chart as directed by the Contracting Officer, and upon doing so shall immediately deliver three copies of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

(End of clause)

**52.236-17 LAYOUT OF WORK (APR 1984)**

The Contractor shall lay out its work from Government established base lines and bench marks indicated on the drawings, and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed by the Contractor or through its negligence before their removal is authorized, the Contracting Officer may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

(End of clause)

**52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FEB 1997)**

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without

such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by," or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown," as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place," that is "furnished and installed".

(d) Shop drawings means drawings, submitted to the Government by the Contractor, subcontractor, or any lower tier subcontractor pursuant to a construction contract, showing in detail (1) the proposed fabrication and assembly of structural elements, and (2) the installation (i.e., fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the contractor to explain in detail specific portions of the work required by the contract. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the Government's reasons therefor. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation, the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the Contracting Officer and one set will be returned to the Contractor.

(End of clause)

#### 52.236-26 PRECONSTRUCTION CONFERENCE (FEB 1995)

If the Contracting Officer decides to conduct a preconstruction conference, the successful offeror will be notified and will be required to attend. The Contracting Officer's notification will include specific details regarding the date, time, and location of the conference, any need for attendance by subcontractors, and information regarding the items to be discussed.

(End of clause)



#### 52.239-4001 Year 2000 Compliance

The contractor shall ensure products provided under this contract, to include hardware, software, firmware, and middleware, whether acting alone or combined as a system, are Year 2000 compliant as defined as follows: Year 2000 compliant means with respect to information technology, that the information technology accurately processes date/time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations, to the extent that other information, used in combination with the information technology being acquired, properly exchanges date/time data with it.

#### 52.239-4005 Year 2000 Compliance - Construction Contracts

a. In accordance with FAR 39.106, the contractor shall ensure that with respect to any design, construction, goods, or services under this contract as well as any subsequent task/delivery orders issued under this contract (if applicable), all information technology contained therein shall be Year 2000 compliant. Specifically:  
The contractor shall:

(1) Perform, maintain, and provide an inventory of all major components to include structures, equipment, items, parts, and furnishings under this contract and each task/delivery order which may be affected by the Y2K compliance requirement.

(2) Indicate whether each component is currently Year 2000 compliant or requires an upgrade for compliance prior to government acceptance.

(End of Clause)

#### 52.239-4006 SECURITY CONTRACT LANGUAGE FOR ALL CORPS OF ENGINEERS' UNCLASSIFIED CONTRACTS (PIL 2003-06, 19 FEB 03)

All Contractor employees (U.S. citizens and Non- U.S. citizens) working under this contract (to include grants, cooperative agreements and task orders) who require access to Automated Information Systems (AIS), (stand alone computers, network computers/systems, e-mail) shall, at a minimum, be designated into an ADP-III position (non-sensitive) in accordance with DoD 5220-22-R, Industrial Security Regulation. The investigative requirements for an ADP-III position are a favorable National Agency Check (NAC), SF-85P, Public Trust Position. The contractor shall have each applicable employee complete a SF-85P and submit to the USACE, Savannah District Security Officer, ATTN: CESAS-SL, 100 West Oglethorpe Avenue, Savannah, GA 31401 within three (3) working days after award of any contract or task order, and shall be submitted prior to the individual being permitted access to an AIS. Contractors who have a commercial or government entity (CAGE) Code and Facility Security Clearance through the Defense Security Service shall process the NACs and forward visit requests/results of NAC to the Savannah District Security Officer (address above). For those contractors who do not have a CAGE Code or Facility Security Clearance, the Savannah District Security Office will process the investigation in coordination with the Contractor and contract employees.

In accordance with Engineering Regulation, ER 380-1-18, Section 4, foreign nationals who work on Corps of Engineers' contracts or task orders shall be approved by the HQUSACE Foreign Disclosure Officer or higher before beginning work on the contract/task order. This regulation includes subcontractor employees. (NOTE: exceptions to

the above requirement include foreign nationals who perform janitorial and/or ground maintenance services.) The contractor shall submit to the Division/District Contract Office, the names of all foreign nationals proposed for performance under this contract/task order, along with documentation to verify that he/she was legally admitted into the United States and has authority to work and/or go to school in the US. Such documentation may include a US passport, Certificate of US citizenship (INS Form N-560 or N-561), Certificate of Naturalization (INS Form N-550 or N-570), foreign passport with I-551 stamp or attached INS Form I-94 indicating employment authorization, Alien Registration Receipt Card with photograph (INS Form I-151 or I-551), Temporary Resident Card (INS Form I-688), Employment Authorization Card (INS Form I-688A), Reentry Permit (INS Form I-327), Refugee Travel Document (INS Form I-571), Employment Authorization Document issued by the INS which contains a photograph (INS Form I-688B).

Classified contracts require the issuance of a DD Form 254 (Department of Defense Contract Security Classification Specification).

#### 52.242-13 BANKRUPTCY (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

(End of clause)

#### 52.242-14 SUSPENSION OF WORK (APR 1984)

(a) The Contracting Officer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract. (c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

(End of clause)

## 52.243-4 CHANGES (AUG 1987)

(a) The Contracting Officer may, at any time, without notice to the sureties, if any, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including changes--

- (1) In the specifications (including drawings and designs);
- (2) In the method or manner of performance of the work;
- (3) In the Government-furnished facilities, equipment, materials, services, or site; or
- (4) Directing acceleration in the performance of the work.

(b) Any other written or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating

- (1) the date, circumstances, and source of the order and
- (2) that the Contractor regards the order as a change order.

(c) Except as provided in this clause, no order, statement, or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for an adjustment based on defective specifications, no adjustment for any change under paragraph (b) of this clause shall be made for any costs incurred more than 20 days before the Contractor gives written notice as required. In the case of defective specifications for which the Government is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.

(e) The Contractor must assert its right to an adjustment under this clause within 30 days after

(1) receipt of a written change order under paragraph (a) of this clause or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting to the Contracting Officer a written statement describing the general nature and amount of the proposal, unless this period is extended by the Government. The statement of proposal for adjustment may be included in the notice under paragraph (b) above.

(f) No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

(End of clause)

## 52.244-5 COMPETITION IN SUBCONTRACTING (DEC 1996)

(a) The Contractor shall select subcontractors (including suppliers) on a competitive basis to the maximum practical extent consistent with the objectives and requirements of the contract.

(b) If the Contractor is an approved mentor under the Department of Defense Pilot Mentor-Protege Program (Pub. L. 101-510, section 831 as amended), the Contractor may award subcontracts under this contract on a noncompetitive basis to its proteges.

(End of clause)

#### 52.248-3 VALUE ENGINEERING--CONSTRUCTION (FEB 2000)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any instant contract savings realized from accepted VECP's, in accordance with paragraph (f) below.

(b) Definitions. "Collateral costs," as used in this clause, means agency costs of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contractor's development and implementation costs," as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistic support. The term does not include the normal administrative costs of processing the VECP.

"Instant contract savings," as used in this clause, means the estimated reduction in Contractor cost of performance resulting from acceptance of the VECP, minus allowable Contractor's development and implementation costs, including subcontractors' development and implementation costs (see paragraph (h) below).

"Value engineering change proposal (VECP)" means a proposal that--

(1) Requires a change to this, the instant contract, to implement; and

(2) Results in reducing the contract price or estimated cost without impairing essential functions or characteristics; provided, that it does not involve a change--

(i) In deliverable end item quantities only; or

(ii) To the contract type only.

(c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (1) through (7) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:

(1) A description of the difference between the existing contract requirement and that proposed, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, and the effect of the change on the end item's performance.

(2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.

(3) A separate, detailed cost estimate for

(i) the affected portions of the existing contract requirement and

(ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under paragraph (h) below.

(4) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.

(5) A prediction of any effects the proposed change would have on collateral costs to the agency.

(6) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.

(7) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

(d) Submission. The Contractor shall submit VECP's to the Resident Engineer at the worksite, with a copy to the Contracting Officer.

(e) Government action.

(1) The Contracting Officer will notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer will notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it shall not be liable for any delay in acting upon a VECP.

If the VECP is not accepted, the Contracting Officer will notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause. The Contracting Officer may accept the VECP, even though an agreement on price reduction has not been reached, by issuing the Contractor a notice to proceed with the change. Until a notice to proceed is issued or a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The decision to accept or reject all or part of any VECP is a unilateral decision made solely at the discretion of the Contracting Officer.

(f) Sharing.

(1) Rates. The Government's share of savings is determined by subtracting Government costs from instant contract savings and multiplying the result by

(i) 45 percent for fixed-price contracts or

(ii) 75 percent for cost-reimbursement contracts.

(2) Payment. Payment of any share due the Contractor for use of a VECP on this contract shall be authorized by a modification to this contract to--

(i) Accept the VECP;

(ii) Reduce the contract price or estimated cost by the amount of instant contract savings; and

(iii) Provide the Contractor's share of savings by adding the amount calculated to the contract price or fee.

(g) Collateral savings. If a VECP is accepted, the Contracting Officer will increase the instant contract amount by 20 percent of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings will not exceed the contract's firm-fixed-price or estimated cost, at the time the VECP is accepted, or \$100,000, whichever is greater. The Contracting Officer is the sole determiner of the amount of collateral savings.

(h) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of \$50,000 or more and may include one in subcontracts of lesser value. In computing any adjustment in this contract's price under paragraph (f) above, the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs clearly resulting from a VECP accepted by the Government under this contract, but shall exclude any value engineering incentive payments to a subcontractor. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that these payments shall not reduce the Government's share of the savings resulting from the VECP.

(i) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

"These data, furnished under the Value Engineering-- Construction clause of contract . . . . ., shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations." If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

(End of clause)

#### 52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (MAY 2004) - ALTERNATE I (SEP 1996)

(a) The Government may terminate performance of work under this contract in whole or, from time to time, in part if the Contracting Officer determines that a termination is in the Government's interest. The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying the extent of termination and the effective date.

(b) After receipt of a Notice of Termination, and except as directed by the Contracting Officer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:

(1) Stop work as specified in the notice.

- (2) Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract.
- (3) Terminate all subcontracts to the extent they relate to the work terminated.
- (4) Assign to the Government, as directed by the Contracting Officer, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.
- (5) With approval or ratification to the extent required by the Contracting Officer, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause.
- (6) As directed by the Contracting Officer, transfer title and deliver to the Government (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated, and (ii) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government.
- (7) Complete performance of the work not terminated.
- (8) Take any action that may be necessary, or that the Contracting Officer may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Government has or may acquire an interest.
- (9) Use its best efforts to sell, as directed or authorized by the Contracting Officer, any property of the types referred to in subparagraph (b)(6) of this clause; provided, however, that the Contractor (i) is not required to extend credit to any purchaser and (ii) may acquire the property under the conditions prescribed by, and at prices approved by, the Contracting Officer. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Contracting Officer.
- (c) The Contractor shall submit complete termination inventory schedules no later than 120 days from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 120-day period.
- (d) After expiration of the plant clearance period as defined in Subpart 49.001 of the Federal Acquisition Regulation, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the Contracting Officer. The Contractor may request the Government to remove those items or enter into an agreement for their storage. Within 15 days, the Government will accept title to those items and remove them or enter into a storage agreement. The Contracting Officer may verify the list upon removal of the items, or if stored, within 45 days from submission of the list, and shall correct the list, as necessary, before final settlement.
- (e) After termination, the Contractor shall submit a final termination settlement proposal to the Contracting Officer in the form and with the certification prescribed by the Contracting Officer. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 1-year period. However, if the Contracting Officer determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the Contractor fails to submit the proposal within the time allowed, the Contracting Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.
- (f) Subject to paragraph (e) of this clause, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount to be paid or remaining to be paid because of the termination. The amount may include a

reasonable allowance for profit on work done. However, the agreed amount, whether under this paragraph (g) or paragraph (g) of this clause, exclusive of costs shown in subparagraph (g)(3) of this clause, may not exceed the total contract price as reduced by (1) the amount of payments previously made and (2) the contract price of work not terminated. The contract shall be modified, and the Contractor paid the agreed amount. Paragraph (g) of this clause shall not limit, restrict, or affect the amount that may be agreed upon to be paid under this paragraph.

(g) If the Contractor and Contracting Officer fail to agree on the whole amount to be paid the Contractor because of the termination of work, the Contracting Officer shall pay the Contractor the amounts determined as follows, but without duplication of any amounts agreed upon under paragraph (f) of this clause:

(1) For contract work performed before the effective date of termination, the total (without duplication of any items) of--

(i) The cost of this work;

(ii) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subdivision (g)(1)(i) of this clause; and

(iii) A sum, as profit on subdivision (g)(1)(i) of this clause, determined by the Contracting Officer under 49.202 of the Federal Acquisition Regulation, in effect on the date of this contract, to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, the Contracting Officer shall allow no profit under this subdivision (iii) and shall reduce the settlement to reflect the indicated rate of loss.

(2) The reasonable costs of settlement of the work terminated, including--

(i) Accounting, legal, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data;

(ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and

(iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.

(h) Except for normal spoilage, and except to the extent that the Government expressly assumed the risk of loss, the Contracting Officer shall exclude from the amounts payable to the Contractor under paragraph (g) of this clause, the fair value, as determined by the Contracting Officer, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government or to a buyer.

(i) The cost principles and procedures of Part 31 of the Federal Acquisition Regulation, in effect on the date of this contract, shall govern all costs claimed, agreed to, or determined under this clause.

(j) The Contractor shall have the right of appeal, under the Disputes clause, from any determination made by the Contracting Officer under paragraph (e), (g), or (l) of this clause, except that if the Contractor failed to submit the termination settlement proposal or request for equitable adjustment within the time provided in paragraph (e) or (l), respectively, and failed to request a time extension, there is no right of appeal.

(k) In arriving at the amount due the Contractor under this clause, there shall be deducted--

(1) All unliquidated advance or other payments to the Contractor under the terminated portion of this contract;

(2) Any claim which the Government has against the Contractor under this contract; and



(3) The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this clause and not recovered by or credited to the Government.

(l) If the termination is partial, the Contractor may file a proposal with the Contracting Officer for an equitable adjustment of the price(s) of the continued portion of the contract. The Contracting Officer shall make any equitable adjustment agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Contracting Officer.

(m)(1) The Government may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the contract, if the Contracting Officer believes the total of these payments will not exceed the amount to which the Contractor will be entitled.

(2) If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury under 50 U.S.C. App. 1215(b)(2). Interest shall be computed for the period from the date the excess payment is received by the Contractor to the date the excess is repaid. Interest shall not be charged on any excess payment due to a reduction in the Contractor's termination settlement proposal because of retention or other disposition of termination inventory until 10 days after the date of the retention or disposition, or a later date determined by the Contracting Officer because of the circumstances.

(n) Unless otherwise provided in this contract or by statute, the Contractor shall maintain all records and documents relating to the terminated portion of this contract for 3 years after final settlement. This includes all books and other evidence bearing on the Contractor's costs and expenses under this contract. The Contractor shall make these records and documents available to the Government, at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents.

(End of clause)

#### 52.249-10 DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984)

(a) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract including any extension, or fails to complete the work within this time, the Government may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the Government may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Government resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Government in completing the work.

(b) The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause, if--

(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include

(i) acts of God or of the public enemy,

(ii) acts of the Government in either its sovereign or contractual capacity,

(iii) acts of another Contractor in the performance of a contract with the Government,

(iv) fires,

(v) floods,

(vi) epidemics,

(vii) quarantine restrictions,

(viii) strikes,

(ix) freight embargoes,

(x) unusually severe weather, or delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

(2) The Contractor, within 10 days from the beginning of any delay (unless extended by the Contracting Officer), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Contracting Officer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.

(c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Government.

The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

#### 52.253-1 COMPUTER GENERATED FORMS (JAN 1991)

(a) Any data required to be submitted on a Standard or Optional Form prescribed by the Federal Acquisition Regulation (FAR) may be submitted on a computer generated version of the form, provided there is no change to the name, content, or sequence of the data elements on the form, and provided the form carries the Standard or Optional Form number and edition date.

(b) Unless prohibited by agency regulations, any data required to be submitted on an agency unique form prescribed by an agency supplement to the FAR may be submitted on a computer generated version of the form provided there is no change to the name, content, or sequence of the data elements on the form and provided the form carries the agency form number and edition date.

(5) If the Contractor submits a computer generated version of a form that is different than the required form, then the rights and obligations of the parties will be determined based on the content of the required form.

(End of clause)

## 252.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)

(a) "Definition. Contracting officer's representative" means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

(End of clause)

252.203-7001 PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-  
CONTRACT-RELATED FELONIES (DEC 2004)

(a) Definitions. As used in this clause—

(1) "Arising out of a contract with the DoD" means any act in connection with—

(i) Attempting to obtain;

(ii) Obtaining, or

(iii) Performing a contract or first-tier subcontract of any agency, department, or component of the Department of Defense (DoD).

(2) "Conviction of fraud or any other felony" means any conviction for fraud or a felony in violation of state or Federal criminal statutes, whether entered on a verdict or plea, including a plea of nolo contendere, for which sentence has been imposed.

(3) "Date of conviction" means the date judgment was entered against the individual.

(b) Any individual who is convicted after September 29, 1988, of fraud or any other felony arising out of a contract with the DoD is prohibited from serving--

(1) In a management or supervisory capacity on this contract;

(2) On the board of directors of the Contractor;

(3) As a consultant, agent, or representative for the Contractor; or

(4) In any other capacity with the authority to influence, advise, or control the decisions of the Contractor with regard to this contract.

(c) Unless waived, the prohibition in paragraph (b) of this clause applies for not less than 5 years from the date of conviction.

(d) 10 U.S.C. 2408 provides that the Contractor shall be subject to a criminal penalty of not more than \$500,000 if convicted of knowingly--

(1) Employing a person under a prohibition specified in paragraph (b) of this clause; or

(2) Allowing such a person to serve on the board of directors of the contractor or first-tier subcontractor.

(e) In addition to the criminal penalties contained in 10 U.S.C. 2408, the Government may consider other available remedies, such as—

(1) Suspension or debarment;

(2) Cancellation of the contract at no cost to the Government; or

(3) Termination of the contract for default.

(f) The Contractor may submit written requests for waiver of the prohibition in paragraph (b) of this clause to the Contracting Officer. Requests shall clearly identify—

(1) The person involved;

(2) The nature of the conviction and resultant sentence or punishment imposed;

(3) The reasons for the requested waiver; and

(4) An explanation of why a waiver is in the interest of national security.

(g) The Contractor agrees to include the substance of this clause, appropriately modified to reflect the identity and relationship of the parties, in all first-tier subcontracts exceeding the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation, except those for commercial items or components.

(h) Pursuant to 10 U.S.C. 2408(c), defense contractors and subcontractors may obtain information as to whether a particular person has been convicted of fraud or any other felony arising out of a contract with the DoD by contacting The Office of Justice Programs, The Denial of Federal Benefits Office, U.S. Department of Justice, telephone (301) 809-4904.

(End of clause)

#### 252.204-7003 CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT (APR 1992)

The Contractor's procedures for protecting against unauthorized disclosure of information shall not require Department of Defense employees or members of the Armed Forces to relinquish control of their work products, whether classified or not, to the contractor.

(End of clause)

#### 252.204-7004 CENTRAL CONTRACTOR REGISTRATION (52.204-7) ALTERNATE A (NOV 2003)

(a) Definitions. As used in this clause--

“Central Contractor Registration (CCR) database” means the primary Government repository for contractor information required for the conduct of business with the Government.

“Commercial and Government Entity (CAGE) code” means--

(1) A code assigned by the Defense Logistics Information Service (DLIS) to identify a commercial or Government entity; or

(2) A code assigned by a member of the North Atlantic Treaty Organization that DLIS records and maintains in the CAGE master file. This type of code is known as an "NCAGE code."

"Data Universal Numbering System (DUNS) number" means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

"Data Universal Numbering System +4 (DUNS+4) number" means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see Subpart 32.11 of the Federal Acquisition Regulation) for the same parent concern.

"Registered in the CCR database" means that--

(1) The Contractor has entered all mandatory information, including the DUNS number or the DUNS+4 number, into the CCR database;

(2) The Contractor's CAGE code is in the CCR database; and

(3) The Government has validated all mandatory data fields and has marked the records "Active."

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the CCR database prior to award, during performance, and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement resulting from this solicitation.

(2) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" or "DUNS +4" followed by the DUNS or DUNS +4 number that identifies the offeror's name and address exactly as stated in the offer. The DUNS number will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(c) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number-

(i) If located within the United States, by calling Dun and Bradstreet at 1-866-705-5711 or via the Internet at <http://www.dnb.com>; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company Physical Street Address, City, State, and Zip Code.

(iv) Company Mailing Address, City, State and Zip Code (if separate from physical).

(v) Company Telephone Number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(d) If the Offeror does not become registered in the CCR database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror.

(e) Processing time, which normally takes 48 hours, should be taken into consideration when registering. Offerors who are not registered should consider applying for registration immediately upon receipt of this solicitation.

(f) The Contractor is responsible for the accuracy and completeness of the data within the CCR database, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(g)

(1)

(i) If a Contractor has legally changed its business name, "doing business as" name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in Subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of Subpart 42.12 of the FAR; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (g)(1)(i) of this clause, or fails to perform the agreement at paragraph (g)(1)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(2) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see FAR Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the "Suspension of payment" paragraph of the EFT clause of this contract.

(h) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at <http://www.ccr.gov> or by calling 1-888-227-2423, or 269-961-5757.

(End of clause)

## 252.205-7000 PROVISION OF INFORMATION TO COOPERATIVE AGREEMENT HOLDERS (DEC 1991)

## (a) Definition.

"Cooperative agreement holder" means a State or local government; a private, nonprofit organization; a tribal organization (as defined in section 4(c) of the Indian Self-Determination and Education Assistance Act (Pub. L. 93-268; 25 U.S.C. 450 (c))); or an economic enterprise (as defined in section 3(e) of the Indian Financing Act of 1974 (Pub. L. 93-362; 25 U.S.C. 1452(e))) whether such economic enterprise is organized for profit or nonprofit purposes; which has an agreement with the Defense Logistics Agency to furnish procurement technical assistance to business entities.

(b) The Contractor shall provide cooperative agreement holders, upon their request, with a list of those appropriate employees or offices responsible for entering into subcontracts under defense contracts. The list shall include the business address, telephone number, and area of responsibility of each employee or office.

(c) The Contractor need not provide the listing to a particular cooperative agreement holder more frequently than once a year.

(End of clause)

## 252.209-7004 SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) Unless the Government determines that there is a compelling reason to do so, the Contractor shall not enter into any subcontract in excess of \$25,000 with a firm, or subsidiary of a firm, that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country.

(b) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country. The notice must include the name of the proposed subcontractor notwithstanding its inclusion on the List of Parties Excluded From Federal Procurement and Nonprocurement Programs.

(End of clause)

## 252.215-7000 PRICING ADJUSTMENTS (DEC 1991)

The term "pricing adjustment," as used in paragraph (a) of the clauses entitled "Price Reduction for Defective Cost or Pricing Data - Modifications," "Subcontractor Cost or Pricing Data," and "Subcontractor Cost or Pricing Data - Modifications," means the aggregate increases and/or decreases in cost plus applicable profits.

(End of clause)

## 252.215-7002 COST ESTIMATING SYSTEM REQUIREMENTS (OCT 1998)

(a) "Definition."

"Estimating system" means the Contractor's policies, procedures, and practices for generating estimates of costs and other data included in proposals submitted to customers in the expectation of receiving contract awards. Estimating system includes the Contractor's --

- (1) Organizational structure;
- (2) Established lines of authority, duties, and responsibilities;
- (3) Internal controls and managerial reviews;
- (4) Flow of work, coordination, and communication; and

(5) Estimating methods, techniques, accumulation of historical costs, and other analyses used to generate cost estimates.1997

(b) "General."

(1) The Contractor shall establish, maintain, and comply with an estimating system that is consistently applied and produces reliable, verifiable, supportable, and documented cost estimates that are an acceptable basis for negotiation of fair and reasonable prices.

(2) The system should be --

(i) Consistent and integrated with the Contractor's related management systems; and

(ii) Subject to applicable financial control systems.

(c) "Applicability". Paragraphs (d) and (e) of this clause apply if the Contractor is a large business and either --

(1) In its fiscal year preceding award of this contract, received Department of Defense (DoD) prime contracts or subcontracts, totaling \$50 million or more for which certified cost or pricing data were required; or

(2) In its fiscal year preceding award of this contract --

(i) Received DoD prime contracts or subcontracts totaling \$10 million or more (but less than \$50 million) for which certified cost or pricing data were required; and

(ii) Was notified in writing by the Contracting Officer that paragraphs (d) and (e) of this clause apply.

(d) "System requirements."

(1) The Contractor shall disclose its estimating system to the Administrative Contracting Officer (ACO) in writing. If the Contractor wishes the Government to protect the information as privileged or confidential, the Contractor must mark the documents with the appropriate legends before submission.

(2) An estimating system disclosure is adequate when the Contractor has provided the ACO with documentation that--

(i) Accurately describes those policies, procedures, and practices that the Contractor currently uses in preparing cost proposals; and

(ii) Provides sufficient detail for the Government to reasonably make an informed judgment regarding the acceptability of the Contractor's estimating practices.



(3) The Contractor shall --

(i) Comply with its disclosed estimating system; and

(ii) Disclose significant changes to the cost estimating system to the ACO on a timely basis.

(e) "Estimating system deficiencies."

(1) The Contractor shall respond to a written report from the Government that identifies deficiencies in the Contractor's estimating system as follows:

(i) If the Contractor agrees with the report findings and recommendations, the Contractor shall --

(A) Within 30 days, state its agreement in writing; and

(B) Within 60 days, correct the deficiencies or submit a corrective action plan showing proposed milestones and actions leading to elimination of the deficiencies.

(ii) If the Contractor disagrees with the report, the Contractor shall, within 30 days, state its rationale for disagreeing.

(2) The ACO will evaluate the Contractor's response and notify the Contractor of the determination concerning remaining deficiencies and/or the adequacy of any proposed or completed corrective action.

(End of clause)

#### 252.219-7009 SECTION 8(A) DIRECT AWARD (MAR 2002)

(a) This contract is issued as a direct award between the contracting office and the 8(a) Contractor pursuant to the Partnership Agreement dated February 1, 2002, between the Small Business Administration (SBA) and the Department of Defense. Accordingly, the SBA, even if not identified in Section A of this contract, is the prime contractor and retains responsibility for 8(a) certification, for 8(a) eligibility determinations and related issues, and for providing counseling and assistance to the 8(a) Contractor under the 8(a) Program. The cognizant SBA district office is:

U.S. Small Business Administration  
South Carolina District Office  
1835 Assembly Street  
Suite 1425  
Columbia, SC 29201-2442

(b) The contracting office is responsible for administering the contract and for taking any action on behalf of the Government under the terms and conditions of the contract; provided that the contracting office shall give advance notice to the SBA before it issues a final notice terminating performance, either in whole or in part, under the contract. The contracting office also shall coordinate with the SBA prior to processing any novation agreement. The contracting office may assign contract administration functions to a contract administration office.

(c) The Contractor agrees that--

(1) It will notify the Contracting Officer, simultaneous with its notification to the SBA (as required by SBA's 8(a) regulations at 13 CFR 124.308), when the owner or owners upon whom 8(a) eligibility is based plan to relinquish

ownership or control of the concern. Consistent with Section 407 of Pub. L. 100-656, transfer of ownership or control shall result in termination of the contract for convenience, unless the SBA waives the requirement for termination prior to the actual relinquishing of ownership and control; and

(2) It will not subcontract the performance of any of the requirements of this contract without the prior written approval of the SBA and the Contracting Officer.

(End of Clause)

252.223-7006 PROHIBITION ON STORAGE AND DISPOSAL OF TOXIC AND HAZARDOUS MATERIALS (APR 1993)

(a) "Definitions".

As used in this clause --

(1) "Storage" means a non-transitory, semi-permanent or permanent holding, placement, or leaving of material. It does not include a temporary accumulation of a limited quantity of a material used in or a waste generated or resulting from authorized activities, such as servicing, maintenance, or repair of Department of Defense (DoD) items, equipment, or facilities.

(2) "Toxic or hazardous materials" means:

(i) Materials referred to in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 U.S.C. 9601(14)) and materials designated under section 102 of CERCLA (42 U.S.C. 9602) (40 CFR part 302);

(ii) Materials that are of an explosive, flammable, or pyrotechnic nature; or

(iii) Materials otherwise identified by the Secretary of Defense as specified in DoD regulations.

(b) In accordance with 10 U.S.C. 2692, the Contractor is prohibited from storing or disposing of non-DoD-owned toxic or hazardous materials on a DoD installation, except to the extent authorized by a statutory exception to 10 U.S.C. 2692 or as authorized by the Secretary of Defense or his designee.

(End of clause)

252.225-7012 Preference for Certain Domestic Commodities (JUN 2004)

(a) Definitions. As used in this clause--

(1) Component means any item supplied to the Government as part of an end product or of another component.

(2) End product means supplies delivered under a line item of this contract.

(3) United States means the 50 States, the District of Columbia, and outlying areas.

(4) U.S.-flag vessel means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b) The Contractor shall deliver under this contract only such of the following items, either as end products or components, that have been grown, reprocessed, reused, or produced in the United States:

- (1) Food.
- (2) Clothing.
- (3) Tents, tarpaulins, or covers.
- (4) Cotton and other natural fiber products.
- (5) Woven silk or woven silk blends.
- (6) Spun silk yarn for cartridge cloth.
- (7) Synthetic fabric, and coated synthetic fabric, including all textile fibers and yarns that are for use in such fabrics.
- (8) Canvas products.
- (9) Wool (whether in the form of fiber or yarn or contained in fabrics, materials, or manufactured articles).
- (10) Any item of individual equipment (Federal Supply Class 8465) manufactured from or containing fibers, yarns, fabrics, or materials listed in this paragraph (b).

(c) This clause does not apply--

(1) To items listed in section 25.104(a) of the Federal Acquisition Regulation (FAR), or other items for which the Government has determined that a satisfactory quality and sufficient quantity cannot be acquired as and when needed at U.S. market prices;

(2) To end products incidentally incorporating cotton, other natural fibers, or wool, for which the estimated value of the cotton, other natural fibers, or wool--

(i) Is not more than 10 percent of the total price of the end product; and (ii) Does not exceed the simplified acquisition threshold in FAR part 2;

(3) To waste and byproducts of cotton or wool fiber for use in the production of propellants and explosives;

(4) To foods, other than fish, shellfish, or seafood, that have been manufactured or processed in the United States, regardless of where the foods (and any component if applicable) were grown or produced. Fish, shellfish, or seafood manufactured or processed in the United States and fish, shellfish, or seafood contained in foods manufactured or processed in the United States shall be provided in accordance with paragraph (d) of this clause;

(5) To chemical warfare protective clothing produced in the countries listed in subsection 225.872-1 of the Defense FAR Supplement; or

(6) To fibers and yarns that are for use in synthetic fabric or coated synthetic fabric (but does apply to the synthetic or coated synthetic fabric itself), if--

(i) The fabric is to be used as a component of an end product that is not a textile product. Examples of textile products, made in whole or in part of fabric, include--

(A) Draperies, floor coverings, furnishings, and bedding (Federal Supply Group 72, Household and Commercial Furnishings and Appliances);

(B) Items made in whole or in part of fabric in Federal Supply Group 83, Textile/leather/furs/apparel/findings/tents/flags, or Federal Supply Group 84, Clothing, Individual Equipment and Insignia;

(C) Upholstered seats (whether for household, office, or other use); and

(D) Parachutes (Federal Supply Class 1670); or

(ii) The fibers and yarns are para-aramid fibers and yarns manufactured in the Netherlands.

(d)(1) Fish, shellfish, and seafood delivered under this contract, or contained in foods delivered under this contract--

(i) Shall be taken from the sea by U.S.-flag vessels; or

(ii) If not taken from the sea, shall be obtained from fishing within the United States; and

(2) Any processing or manufacturing of the fish, shellfish, or seafood shall be performed on a U.S.-flag vessel or in the United States.

(End of clause)

#### 252.225-7031 SECONDARY ARAB BOYCOTT OF ISRAEL (APR 2003)

(a) Definitions. As used in this provision--

(1) Foreign person means any person (including any individual, partnership, corporation, or other form of association) other than a United States person.

(2) United States person is defined in 50 U.S.C. App. 2415(2) and means--

(i) Any United States resident or national (other than an individual resident outside the United States who is employed by other than a United States person);

(ii) Any domestic concern (including any permanent domestic establishment of any foreign concern); and

(iii) Any foreign subsidiary or affiliate (including any permanent foreign establishment) of any domestic concern that is controlled in fact by such domestic concern.

(b) Certification. If the offeror is a foreign person, the offeror certifies, by submission of an offer, that it--

(1) Does not comply with the Secondary Arab Boycott of Israel; and

(2) Is not taking or knowingly agreeing to take any action, with respect to the Secondary Boycott of Israel by Arab countries, which 50 U.S.C. App. 2407(a) prohibits a United States person from taking.

(End of provision)

#### 252.226-7001 UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES, AND NATIVE HAWAIIAN SMALL BUSINESS CONCERNS (SEP 2004)

(a) Definitions. As used in this clause--

Indian means--

(1) Any person who is a member of any Indian tribe, band, group, pueblo, or community that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c); and

(2) Any "Native" as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.).

Indian organization means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C. chapter 17.

Indian-owned economic enterprise means any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership constitutes not less than 51 percent of the enterprise.

Indian tribe means any Indian tribe, band, group, pueblo, or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, that is recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1452(c).

Interested party means a contractor or an actual or prospective offeror whose direct economic interest would be affected by the award of a subcontract or by the failure to award a subcontract.

Native Hawaiian small business concern means an entity that is--

(1) A small business concern as defined in section 3 of the Small Business Act (15 U.S.C. 632) and relevant implementing regulations; and

(2) Owned and controlled by a Native Hawaiian as defined in 25 U.S.C. 4221(9).

(b) The Contractor shall use its best efforts to give Indian organizations, Indian-owned economic enterprises, and Native Hawaiian small business concerns the maximum practicable opportunity to participate in the subcontracts it awards, to the fullest extent consistent with efficient performance of the contract.

(c) The Contracting Officer and the Contractor, acting in good faith, may rely on the representation of an Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern as to its eligibility, unless an interested party challenges its status or the Contracting Officer has independent reason to question that status.

(d) In the event of a challenge to the representation of a subcontractor, the Contracting Officer will refer the matter to--

(1) For matters relating to Indian organizations or Indian-owned economic enterprises: U.S. Department of the Interior, Bureau of Indian Affairs, Attn: Chief, Division of Contracting and Grants Administration, 1849 C Street NW, MS-2626-MIB, Washington, DC 20240-4000. The BIA will determine the eligibility and will notify the Contracting Officer.

(2) For matters relating to Native Hawaiian small business concerns: Department of Hawaiian Home Lands, PO Box 1879, Honolulu, HI 96805. The Department of Hawaiian Home Lands will determine the eligibility and will notify the Contracting Officer.

(e) No incentive payment will be made--

(1) While a challenge is pending; or

(2) If a subcontractor is determined to be an ineligible participant.

(f)(1) The Contractor, on its own behalf or on behalf of a subcontractor at any tier, may request an incentive payment in accordance with this clause.

(2) The incentive amount that may be requested is 5 percent of the estimated cost, target cost, or fixed price included in the subcontract at the time of award to the Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(3) In the case of a subcontract for commercial items, the Contractor may receive an incentive payment only if the subcontracted items are produced or manufactured in whole or in part by an Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(4) The Contractor has the burden of proving the amount claimed and shall assert its request for an incentive payment prior to completion of contract performance.

(5) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, will authorize an incentive payment of 5 percent of the estimated cost, target cost, or fixed price included in the subcontract awarded to the Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(6) If the Contractor requests and receives an incentive payment on behalf of a subcontractor, the Contractor is obligated to pay the subcontractor the incentive amount.

(g) The Contractor shall insert the substance of this clause, including this paragraph (g), in all subcontracts exceeding \$500,000.

(End of clause)

#### 252.227-7022 GOVERNMENT RIGHTS (UNLIMITED) (MAR 1979)

The Government shall have unlimited rights, in all drawings, designs, specifications, notes and other works developed in the performance of this contract, including the right to use same on any other Government design or construction without additional compensation to the Contractor. The Contractor hereby grants to the Government a paid-up license throughout the world to all such works to which he may assert or establish any claim under design patent or copyright laws. The Contractor for a period of three (3) years after completion of the project agrees to furnish the original or copies of all such works on the request of the Contracting Officer.

(End of clause)

#### 252.227-7033 RIGHTS IN SHOP DRAWINGS (APR 1966)

(a) Shop drawings for construction means drawings, submitted to the Government by the Construction Contractor, subcontractor or any lower-tier subcontractor pursuant to a construction contract, showing in detail (i) the proposed fabrication and assembly of structural elements and (ii) the installation (i.e., form, fit, and attachment details) of materials or equipment. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(b) This clause, including this paragraph (b), shall be included in all subcontracts hereunder at any tier.

252.236-7000 MODIFICATION PROPOSALS - PRICE BREAKDOWN. (DEC 1991)

(a) The Contractor shall furnish a price breakdown, itemized as required and within the time specified by the Contracting Officer, with any proposal for a contract modification.

(b) The price breakdown --

(1) Must include sufficient detail to permit an analysis of profit, and of all costs for --

(i) Material;

(ii) Labor;

(iii) Equipment;

(iv) Subcontracts; and

(v) Overhead; and

(2) Must cover all work involved in the modification, whether the work was deleted, added, or changed.

(c) The Contractor shall provide similar price breakdowns to support any amounts claimed for subcontracts.

(d) The Contractor's proposal shall include a justification for any time extension proposed.

252.236-7001 CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS (AUG 2000)

(a) The Government will provide to the Contractor, without charge, one set of contract drawings and specifications, except publications incorporated into the technical provisions by reference, in electronic or paper media as chosen by the Contracting Officer.

(b) The Contractor shall--

(1) Check all drawings furnished immediately upon receipt;

(2) Compare all drawings and verify the figures before laying out the work;

(3) Promptly notify the Contracting Officer of any discrepancies;

(4) Be responsible for any errors that might have been avoided by complying with this paragraph (b); and

(5) Reproduce and print contract drawings and specifications as needed.

(c) In general--

(1) Large-scale drawings shall govern small-scale drawings; and

(2) The Contractor shall follow figures marked on drawings in preference to scale measurements.

(d) Omissions from the drawings or specifications or the misdescription of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.

(e) The work shall conform to the specifications and the contract drawings identified on the following index of drawings:

| Title                                  | File      | Drawing No. |
|--|-----------|-------------|
| Urban Assault Course Complex, Volume I | 730-46-01 | GI-001      |
| Shoot house                            | 230-46-01 | GI-001      |

(End of clause)

#### 252.242-7000 POSTAWARD CONFERENCE (DEC 1991)

The Contractor agrees to attend any postaward conference convened by the contracting activity or contract administration office in accordance with Federal Acquisition Regulation subpart 42.5.

(End of clause)

#### 252.242-7001 NOTICE OF EARNED VALUE MANAGEMENT SYSTEM (MAR 2005)

(a) The offeror shall provide documentation that the cognizant Administrative Contracting Officer has recognized that the proposed earned value management system (EVMS) complies with the EVMS criteria of DoDI 5000.2, Operation of the Defense Acquisition System, or that the proposed cost/schedule control system has been accepted by the Department of Defense.

(b) If the offeror proposes to use a system that does not meet the requirements of paragraph (a) of this provision, the offeror shall submit a comprehensive plan for compliance with the EVMS criteria.

(1) The plan shall--

(i) Describe the EVMS the offeror intends to use in performance of the contract;

(ii) Distinguish between the offeror's existing management system and modifications proposed to meet the criteria;

(iii) Describe the management system and its application in terms of the 32 EVMS criteria;

(iv) Describe the proposed procedure for administration of the criteria as applied to subcontractors; and

(v) Provide documentation describing the process and results of any third-party or self-evaluation of the system's compliance with EVMS criteria.

(2) The offeror shall provide information and assistance as required by the Contracting Officer to support review of the plan.

(3) The Government will review the offeror's plan for EVMS before contract award.



(c) Offerors shall identify the major subcontractors, or major subcontracted effort if major subcontractors have not been selected, planned for application of the criteria. The prime contractor and the Government shall agree to subcontractors selected for application of the EVMS criteria.

(End of provision)

#### 252.243-7001 PRICING OF CONTRACT MODIFICATIONS (DEC 1991)

When costs are a factor in any price adjustment under this contract, the contract cost principles and procedures in FAR part 31 and DFARS part 231, in effect on the date of this contract, apply.

#### 252.243-7002 REQUESTS FOR EQUITABLE ADJUSTMENT (MAR 1998)

(a) The amount of any request for equitable adjustment to contract terms shall accurately reflect the contract adjustment for which the Contractor believes the Government is liable. The request shall include only costs for performing the change, and shall not include any costs that already have been reimbursed or that have been separately claimed. All indirect costs included in the request shall be properly allocable to the change in accordance with applicable acquisition regulations.

(b) In accordance with 10 U.S.C. 2410(a), any request for equitable adjustment to contract terms that exceeds the simplified acquisition threshold shall bear, at the time of submission, the following certificate executed by an individual authorized to certify the request on behalf of the Contractor:

I certify that the request is made in good faith, and that the supporting data are accurate and complete to the best of my knowledge and belief.

-----  
(Official's Name)

-----  
(Title)

(c) The certification in paragraph (b) of this clause requires full disclosure of all relevant facts, including--

(1) Cost or pricing data if required in accordance with subsection 15.403-4 of the Federal Acquisition Regulation (FAR); and

(2) Information other than cost or pricing data, in accordance with subsection 15.403-3 of the FAR, including actual cost data and data to support any estimated costs, even if cost or pricing data are not required.

(d) The certification requirement in paragraph (b) of this clause does not apply to----

(1) Requests for routine contract payments; for example, requests for payment for accepted supplies and services, routine vouchers under a cost-reimbursement type contract, or progress payment invoices; or

(2) Final adjustment under an incentive provision of the contract.

#### 252.244-7000 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS

(DOD) (MAR 2000)

In addition to the clauses listed in paragraph (c) of the Subcontracts for Commercial Items and Commercial Components clause of this contract (Federal Acquisition Regulation 52.244-6), the Contractor shall include the terms of the following clauses, if applicable, in subcontracts for commercial items or commercial components, awarded at any tier under this contract:

252.225-7014 Preference for Domestic Specialty Metals, Alternate I (10 U.S.C. 2241 note).

252.247-7023 Transportation of Supplies by Sea (10 U.S.C. 2631).

252.247-7024 Notification of Transportation of Supplies by Sea (10 U.S.C. 2631).

(End of clause)

252.247-7023 Transportation of Supplies by Sea (MAY 2002)

(a) Definitions. As used in this clause --

(1) "Components" means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) "Department of Defense" (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) "Foreign flag vessel" means any vessel that is not a U.S.-flag vessel.

(4) "Ocean transportation" means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) "Subcontractor" means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract.

(6) "Supplies" means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) "Supplies" includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) "U.S.-flag vessel" means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b)(1) The Contractor shall use U.S.-flag vessels when transporting any supplies by sea under this contract.

(2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessels if--

(i) This contract is a construction contract; or

(ii) The supplies being transported are--

(A) Noncommercial items; or

(B) Commercial items that--

(1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it contracts for f.o.b. destination shipment);

(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that --

(1) U.S.-flag vessels are not available for timely shipment;

(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum --

(1) Type, weight, and cube of cargo;

(2) Required shipping date;

(3) Special handling and discharge requirements;

(4) Loading and discharge points;

(5) Name of shipper and consignee;

(6) Prime contract number; and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Maritime Administration, Office of Cargo Preference, U.S. Department of Transportation, 400 Seventh Street SW., Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information:

(1) Prime contract number;

- (2) Name of vessel;
- (3) Vessel flag of registry;
- (4) Date of loading;
- (5) Port of loading;
- (6) Port of final discharge;
- (7) Description of commodity;
- (8) Gross weight in pounds and cubic feet if available;
- (9) Total ocean freight in U.S. dollars; and
- (10) Name of the steamship company.

(f) The Contractor shall provide with its final invoice under this contract a representation that to the best of its knowledge and belief--

- (1) No ocean transportation was used in the performance of this contract;
- (2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;
- (3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-U.S.-flag ocean transportation; or
- (4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format:

| ITEM<br>DESCRIPTION | CONTRACT<br>LINE ITEMS | QUANTITY |
|---------------------|------------------------|----------|
| _____               | _____                  | _____    |
| _____               | _____                  | _____    |
| _____               | _____                  | _____    |
| TOTAL               | _____                  | _____    |

(g) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

(h) In the award of subcontracts for the types of supplies described in paragraph (b)(2) of this clause, the Contractor shall flow down the requirements of this clause as follows:

- (1) The Contractor shall insert the substance of this clause, including this paragraph (h), in subcontracts that exceed the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.
- (2) The Contractor shall insert the substance of paragraphs (a) through (e) of this clause, and this paragraph (h), in subcontracts that are at or below the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.

(End of clause)

## 252.247-7024 Notification of Transportation of Supplies by Sea (MAR 2000)

(a) The Contractor has indicated by the response to the solicitation provision, Representation of Extent of Transportation by Sea, that it did not anticipate transporting by sea any supplies. If, however, after the award of this contract, the Contractor learns that supplies, as defined in the Transportation of Supplies by Sea clause of this contract, will be transported by sea, the Contractor --

(1) Shall notify the Contracting Officer of that fact; and

(2) Hereby agrees to comply with all the terms and conditions of the Transportation of Supplies by Sea clause of this contract.

(b) The Contractor shall include this clause; including this paragraph (b), revised as necessary to reflect the relationship of the contracting parties--

(1) In all subcontracts under this contract, if this contract is a construction contract; or

(2) If this contract is not a construction contract, in all subcontracts under this contract that are for--

(i) Noncommercial items; or

(ii) Commercial items that--

(A) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(B) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(C) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(End of clause)

## Section 00800 - Special Contract Requirements

## CLAUSES INCORPORATED BY FULL TEXT

## 52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to (a) commence work under this contract within 5 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than 365 calendar days. The time stated for completion shall include final cleanup of the premises.

(End of clause)

## 52.211-12 LIQUIDATED DAMAGES--CONSTRUCTION (SEP 2000)

(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of \$653.00 for each calendar day of delay until the work is completed or accepted.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

(End of clause)

## 52.217-7 OPTION FOR INCREASED QUANTITY--SEPARATELY PRICED LINE ITEM (MAR 1989)

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within 90 calendar days of contract award. Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree.

(End of clause)

## 52.223-9 ESTIMATE OF PERCENTAGE OF RECOVERED MATERIAL CONTENT FOR EPA-DESIGNATED PRODUCTS (AUG 2000)

(a) Definitions. As used in this clause--

Postconsumer material means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of "recovered material."

Recovered material means waste materials and by-products recovered or diverted from solid waste, but the term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process.

(b) The Contractor, on completion of this contract, shall--

(1) Estimate the percentage of the total recovered material used in contract performance, including, if applicable, the percentage of postconsumer material content; and

(2) Submit this estimate to Savannah District Office.

(End of clause)

52.223-4002 U.S. ARMY CORPS OF ENGINEERS SAFETY AND HEALTH REQUIREMENTS MANUAL,  
EM 385-1-1

This paragraph applies to contracts and purchase orders that require the contractor to comply with EM 385-1-1 (e.g., contracts that include the Accident Prevention clause at FAR 52.236-13 and/or other safety provisions). EM 385-1-1 and its changes are available at <http://www.hq.usace.army.mil>. (At the HQ homepage, select Safety and Occupational Health.) The Contractor shall be responsible for complying with the current edition and all changes posted on the web through the date that is 10 calendar days prior to the date offers are due. If the solicitation is amended to extend the time set for receipt of offers, the 10 calendar days rule stated above shall be applied against the amended date. (For example, if offers are due on 10 April, all changes posted on or before 31 March shall apply to the contract. If the time for receipt of offers is extended from 10 April to 20 April, all changes posted on or before 10 April shall apply to the contract.)

52.228-4002 REQUIRED INSURANCE (FEB 1987 SAS) (Ref. FAR 28.307)

(a) The Contractor shall procure and maintain during the entire period of his performance under this contract the following minimum insurance:

Comprehensive and Employer's Liability Insurance in the amount required by the State law in which the work is to be performed under this contract.

Comprehensive General Liability Insurance in an amount not less than \$500,000 per accident.

Automobile Liability Insurance: \$200,000 per person and \$500,000 per accident for bodily injury liability and \$20,000 property damage liability.

(b) Prior to the commencement of work hereunder, the Contractor shall furnish to the Contracting Officer a certificate or written statement of the above-required insurance. The policies evidencing required insurance shall contain an endorsement to the effect that cancellation, or any material change in the policies adversely affecting the interests of the Government in such insurance, shall not be effective for such period as may be prescribed by the laws of the State in which this contract is to be performed and in no event less than 30 days after written notice thereof to the Contracting Officer.

(c) The Contractor agrees to insert the substance of this clause, including this subparagraph (c), in all subcontracts hereunder.

(End of clause)

52.231-5000 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE  
MAR 1995)--EFARS

(a) This clause does not apply to terminations. See 52.249-5000, Basis for Settlement of Proposals and FAR Part 49.

(b) Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region III. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply.

(c) Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the contracting officer shall request the contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet.

(End of clause)

#### 52.232-4007 ACCOUNTING AND APPROPRIATION DATA (APR 1989 CESAS-RM)

See Section 00100, Clause 52.232-4006, Subject to Availability of Funds

(End of clause)

#### 52.232-4008 DESIGNATED BILLING OFFICE (APR 1989 CESAS-RM)

Invoices will be mailed to:

Fort Stewart Area Office (CD-ST)  
Bldg. 936, Wilson Road  
Fort Stewart, GA 31314

(End of Clause)

#### 52.232-4009 DESIGNATED PAYMENT OFFICE (AUG 1998 CESAS-RM-F)

Payment will be made by:

U.S. Army Corps of Engineers Finance Center  
ATTN: CEFC-AO-P  
5720 Integrity Drive  
Millington, TN 38054-5005

(End of clause)



**52.236-1 PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984)**

The Contractor shall perform on the site, and with its own organization, work equivalent to at least twenty percent (20%) of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government.

(End of clause)

**52.236-14 AVAILABILITY AND USE OF UTILITY SERVICES (APR 1984)**

(a) The Government shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the Government or, where the utility is produced by the Government, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.

(b) The Contractor, at its expense and in a workmanlike manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the work by the Government, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

(End of clause)

**52.236-4013 CONTRACTOR-PREPARED NETWORK ANALYSIS SYSTEM  
(January 2002 SAS) (Ref. DFARS 236.273)**

The progress chart to be prepared by the contractor pursuant to FAR 52.236-15, Schedules for Construction Contracts, shall utilize the Critical Path Method (CPM) of network calculation. (See Attachment 1 to Section 00800).

**52.236-4015 PRECONSTRUCTION CONFERENCE (OCT 1988 SAS) (Ref. FAR 36.305)**

(a) A preconstruction conference will be arranged by the Area/Resident Engineer after award of contract and before commencement of work. The Area/Resident Engineer will notify the Contractor of the time and date set for the meeting. At this conference, the Contractor shall be oriented with respect to Government procedures and line of authority, contractual, administrative, and construction matters.

(b) The Contractor shall bring to this conference, in completed form, a Certificate of Insurance, plus the following items in either completed or draft form:

- Accident Prevention Plan (5 copies)  
(use format shown in Attachment 1 to SECTION 00800)
- Quality Control Plan (5 copies)

Letter Appointing Superintendent  
Transmittal Register  
Power of Attorney and Certified Copy of Resolution  
Network Analysis System, when applicable  
List of Subcontractors

(c) A letter of record will be written documenting all items discussed at the conference, and a copy will be furnished by the Area/Resident Engineer to all in attendance.

(End of clause)

#### 52.236-4016 VIDEO TAPING OPERATING AND MAINTENANCE INSTRUCTIONS (MAR 1987 SASCD-SQ)

For all of the operating and maintenance instructions which are required in the contract specifications, the Contractor shall video tape these instructions as they are presented to the Government representatives. These tapes shall provide clear and understandable detailed instructions for all items required by the contract specifications. The tapes shall be prepared by an experienced video director/cameraman using good quality half-inch VHS color tape with correct sound equipment, lighting, and backdrop. The sound and picture quality shall be high and subject to approval by the Contracting Officer. The tapes are intended as followup training for other Government representatives at a later date. They must be suitable for this purpose. The Contractor shall be responsible for the contents of the instructions and shall verify that they are correct prior to taping. The Contractor may submit individual equipment manufacturer's instructional tape(s), provided they meet the above qualifications and cover the actual equipment that is installed. The tape(s) shall be for specific equipment identified by contents and contract name and number. The Contractor shall submit one copy of the tape(s) to the Contracting Officer for review and approval. Unacceptable tapes are to be corrected by the Contractor as indicated by the Contracting Officer at no additional cost to the Government.

(End of clause)

#### 52.236-4017 SUBMITTAL OF MODIFICATION COST ESTIMATE PROPOSALS (MAR 1992 SAS) (Ref. DFARS 52.236-7000)

When submittals of Cost Estimate Proposals are required for additions or deletions to work under this contract by modification, the Contractor shall use DA Form 5418-R titled "Cost Estimate Analysis" (see Attachment 1 to SECTION 00800). A separate assemblage will be prepared for submittal by each trade affected by the proposed work.

(End of clause)

#### 52.246-12 INSPECTION OF CONSTRUCTION (AUG 1996)

(a) Definition. "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) Government inspections and tests are for the sole benefit of the Government and do not--

(1) Relieve the Contractor of responsibility for providing adequate quality control measures;

(2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;

(3) Constitute or imply acceptance; or

(4) Affect the continuing rights of the Government after acceptance of the completed work under paragraph (i) of this section.

(d) The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.

(e) The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Government may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The Government shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(g) If the Contractor does not promptly replace or correct rejected work, the Government may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor or (2) terminate for default the Contractor's right to proceed.

(h) If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(i) Unless otherwise specified in the contract, the Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

(End of clause)

#### 52.246-21 WARRANTY OF CONSTRUCTION (MAR 1994)

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (i) of this clause, that work performed under this contract conforms to the contract requirements and is free of any

defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

(j) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

(End of clause)

(a) This provision specifies the procedure for the determination of time extensions for unusually severe weather in accordance with the contract clause entitled DEFAULT (FIXED-PRICE CONSTRUCTION). In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

(1) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

(2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

(b) The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

**MONTHLY ANTICIPATED ADVERSE WEATHER DELAY  
WORKDAYS BASED ON 5-DAY WORK WEEK**

| JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 6   | 6   | 5   | 4   | 5   | 7   | 9   | 8   | 5   | 2   | 3   | 6   |

(c) Upon acknowledgment of the Notice to Proceed and continuing through-out the contract, the Contractor will record on the daily Contractor Quality Control report the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled workday. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day in each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph (b) above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather workdays, and issue a modification in accordance with the contract clause entitled DEFAULT (FIXED PRICE CONSTRUCTION).

(End of clause)

**52.249-5000 BASIS FOR SETTLEMENT OF PROPOSALS - EFARS**

Actual costs will be used to determine equipment costs for a settlement proposal submitted on the total cost basis under FAR 49.206-2(b). In evaluating a terminations settlement proposal using the total cost basis, the following principles will be applied to determine allowable equipment costs:

(1) Actual costs for each piece of equipment, or groups of similar serial or series equipment, need not be available in the contractor's accounting records to determine total actual equipment costs.

(2) If equipment costs have been allocated to a contract using predetermined rates, those charges will be adjusted to actual costs.

(3) Recorded job costs adjusted for unallowable expenses will be used to determine equipment operating expenses.

(4) Ownership costs (depreciation) will be determined using the contractor's depreciation schedule (subject to the provisions of FAR 31.205-11).

(5) License, taxes, storage and insurance costs are normally recovered as an indirect expense and unless the contractor charges these costs directly to contracts, they will be recovered through the indirect expense rate.

(End of Clause)

ATTACHMENT 1 TO SECTION 00800

LIST OF ATTACHMENTS

1. Contract Drawings:

File No. 730-46-01, Volume 1 - Sheets 1 through 87 and  
Volume 2 - Sheets 1 through 37

2. Rates of Wages:

3. Formats:

Army Project Sign

Project Sign Legend Defined

Project Sign Erection Detail

Corps of Engineers Logo

Accident Prevention Plan (Ref. FAR 52.236-13 and EM 385-1-1)

Construction Quality Control Report

Small and Disadvantaged Business Subcontracting Plan

Weekly Temporary Electrical Inspection

4. Minimum Standard for Temporary Electrical Service (Ref. FAR 52.236-14)

5. Forms:

SAS Form 9 - Activity Hazard Analysis

SAD Form 1666a-R Safety Checklist for Crawler-, Truck-, Wheel-, and  
Ringer-Mounted Cranes

SAD Form 1666a-R Safety Checklist for Control of Hazardous Energy  
(Lockout/Tagout)

SAD Form 1666d-R Safety Checklist for Motor Vehicles, Trailers, and Trucks

SAD Form 1666d-R Safety Checklist for Safe Access and Fall Protection

SAD Form 1666d-R Safety Checklist for Scaffolds - Other Types

SAD Form 1666e-R Safety Checklist for Crawler Tractors and Dozers

SAD Form 1666e-R Safety Checklist for Cutting/Welding Operations

SAD Form 1666e-R Safety Checklist for Demolition Operations

SAD Form 1666e-R Safety Checklist for Forms, Falsework, and Concrete  
Operations

SAD Form 1666e-R Safety Checklist for Permit Required Confined Spaces  
(PRCS)

SAD Form 1666e-R Safety Checklist for Personal Protective Equipment

SAD Form 1666e-R Safety Checklist for Portable Ladders

SAD Form 1666e-R Safety Checklist for Portal, Tower, and Pillar Cranes

SAD Form 1666e-R Safety Checklist for Rigging

SAD Form 1666e-R Safety Checklist for Sanitation/Housekeeping

SAD Form 1666e-R Safety Checklist for Scaffolds - Metal Frame

SAD Form 1666e-R Safety Checklist for Scrapers, Motor Graders, and Other Mobile Equipment

SAD Form 1666e-R Safety Checklist for Structural Steel Erection

SAD Form 1666e-R Safety Checklist for Tree Work, Maintenance, or Removal Operations

SAD Form 1666e-R Safety Checklist for Trenching and Excavation Competent Person

SAD Form 1666e-R Safety Checklist for Trenching and Excavation Operations

SAD Form 1666f-R Safety Checklist for Crane Inspections

SAD Form 1666g-R Safety Checklist for Material Hoists

SAD Form 1666h-R Safety Checklist for Earth Drilling Equipment

ENG Form 4025 - Transmittal of Shop Drawings, Equipment Data, Material Samples, or Manufacturer's Certificates of Compliance

DA Form 5418-R - Cost Estimate Analysis

Standard Form LLL-A - Disclosure of Lobbying Activities

Real Property Inventory

Fort Stewart and Hunter Army Airfield Borrow Pit Excavation Permit

General Decision Number: GA030036 09/02/2005 GA36

Superseded General Decision Number: GA020036

State: Georgia

Construction Type: Building

Counties: Appling, Atkinson, Bacon, Brantley, Bulloch, Burke, Candler, Charlton, Clinch, Echols, Emanuel, Evans, Jeff Davis, Jefferson, Jenkins, Johnson, Laurens, Liberty, Long, McIntosh, Montgomery, Pierce, Screven, Tattnall, Telfair, Toombs, Treutlen, Ware, Wayne and Wheeler Counties in Georgia.

BUILDING CONSTRUCTION PROJECTS (does not include residential construction consisting of single family homes and apartments up to and including 4 stories)

| Modification Number | Publication Date |
|---------------------|------------------|
| 0                   | 06/13/2003       |
| 1                   | 07/09/2004       |
| 2                   | 02/11/2005       |
| 3                   | 09/02/2005       |

\* CARP0144-002 12/01/2004

JOHNSON, LAURENS, MONTGOMERY, TELFAIR, TREUTLEN AND WHEELER COUNTIES:

|                 | Rates    | Fringes |
|-----------------|----------|---------|
| Millwright..... | \$ 18.85 | 6.65    |

-----  
\* CARP0256-001 07/01/2005

APPLING, ATKINSON, BACON, BRANTLEY, BULLOCH, CANDLER, CHARLTON, CLINCH, ECHOLS, EVANS, JEFF DAVIS, LIBERTY, LONG, MCINTOSH, PIERCE, SCREVEN, TATTNALL, TOOMBS, WARE, AND WAYNE COUNTIES:

|                 | Rates    | Fringes |
|-----------------|----------|---------|
| Millwright..... | \$ 18.84 | 6.27    |

FOOTNOTE: Work with creosote materials, acid or other strong chemicals; work with cofferdams & tunnels; swinging scaffolds & boatswain chair, 25 ft. or higher; chimneys,



silos or towers which are independent of the building and which are 25 ft. or higher; clip forms; erecting & dismantling scaffolds 35 ft. or higher; operation of radial arm saws: \$.50 per hour additional. If handrails and/or safety belts are provided by the contractor, the premium pay will not be applicable.

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 \* CARP0283-001 10/01/2004

BURKE, EMANUEL, JEFFERSON AND JENKINS COUNTIES:

|                 | Rates    | Fringes |
|-----------------|----------|---------|
| Millwright..... | \$ 18.60 | 6.72    |

-----  
 SUGA2000-002 05/10/2000

|  | Rates    | Fringes |
|--|----------|---------|
| Bricklayer.....  | \$ 15.00 |         |
| Cabinet Installer.....   | \$ 8.83  |         |
| Carpenter (does not include batt insulation or drywall hanging)..... | \$ 13.31 |         |
| Cement Mason/Concrete Finisher.                                      | \$ 12.04 |         |
| Drywall Hanger.....  | \$ 13.64 |         |
| Electrician.....   | \$ 12.29 |         |
| HVAC Mechanic (does not include HVAC duct work).....                 | \$ 11.94 |         |
| Insulator - Batt.....  | \$ 7.00  |         |
| Ironworker, Structural.....  | \$ 10.13 |         |
| Laborer.....   | \$ 7.95  |         |
| Mason Tender.....  | \$ 8.00  |         |
| Painter, Brush (does not include drywall finishing)....              | \$ 12.44 |         |
| Pipefitter (does not include HVAC piping).....                       | \$ 15.27 | 3.20    |
| Plumber (does not include HVAC piping).....                          | \$ 13.69 |         |
| Power equipment operators:   |          |         |
| Backhoe.....   | \$ 11.97 |         |
| Roller.....  | \$ 8.54  |         |
| Roofer (including Built Up, Composition and Single Ply)....          | \$ 10.00 |         |
| Sheet Metal Worker (includes HVAC duct work).....                    | \$ 10.45 |         |

Truck Driver..... \$ 8.70

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

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#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations

Wage and Hour Division

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board

U.S. Department of Labor

200 Constitution Avenue, N.W.

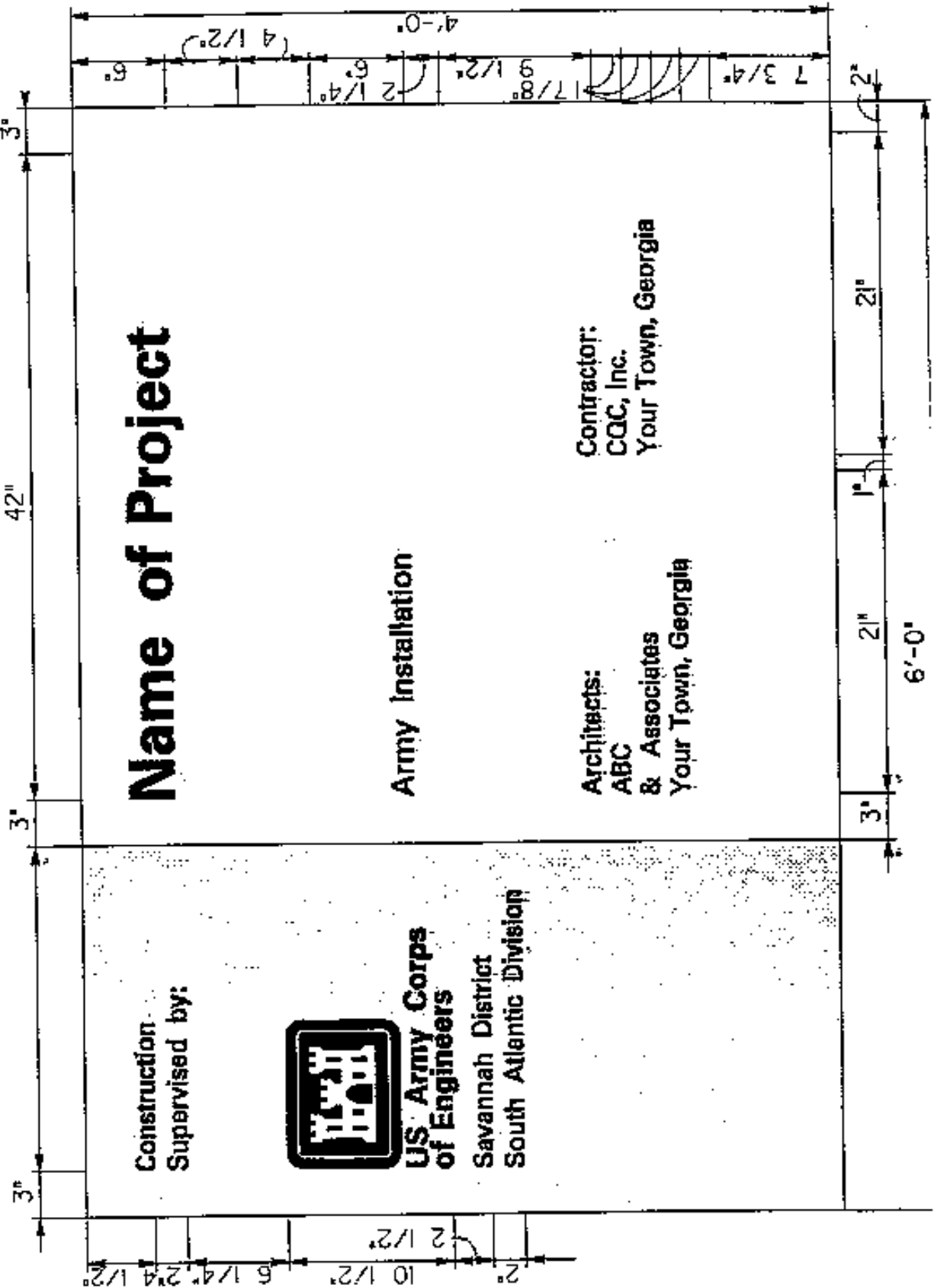
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION





PROJECT SIGN LEGEND DEFINED

Legend Group 1: The words:

|                 |    |                          |
|-----------------|----|--------------------------|
| "Construction   | or | "Design and Construction |
| Supervised by:" |    | Supervised by:"          |

shall be placed on two lines using black, 1.25" Helvetica regular typeface. Maximum line length is 19".

10.5" Reverse Signature: The Corps symbol shall be a 10.5" white reverse signature using a 6" castle on a red background. The castle and surrounding border lines shall be white. The castle windows, door, and logo background are to be red. The words "U.S. Army Corps of Engineers" shall be black.

Legend Group 2: The words:

"Savannah District  
South Atlantic Division"

shall be placed on two lines below the 10.5" reverse signature, using black, 1.25" Helvetica regular typeface.

Legend Group 3: The "Name of Project" shall be placed on one to three lines using white 3" Helvetica bold typeface. Maximum line length is 42".

Legend Group 4: The "Army Installation" shall be a one or two line identification of the facility or name of the sponsoring department. Lettering is to be white, 1.5" Helvetica regular typeface. Maximum line length is 42".

NOTE: Cross-align the first line of legend group 4 with the first line of the Corps signature (U.S. Army Corps) as shown.

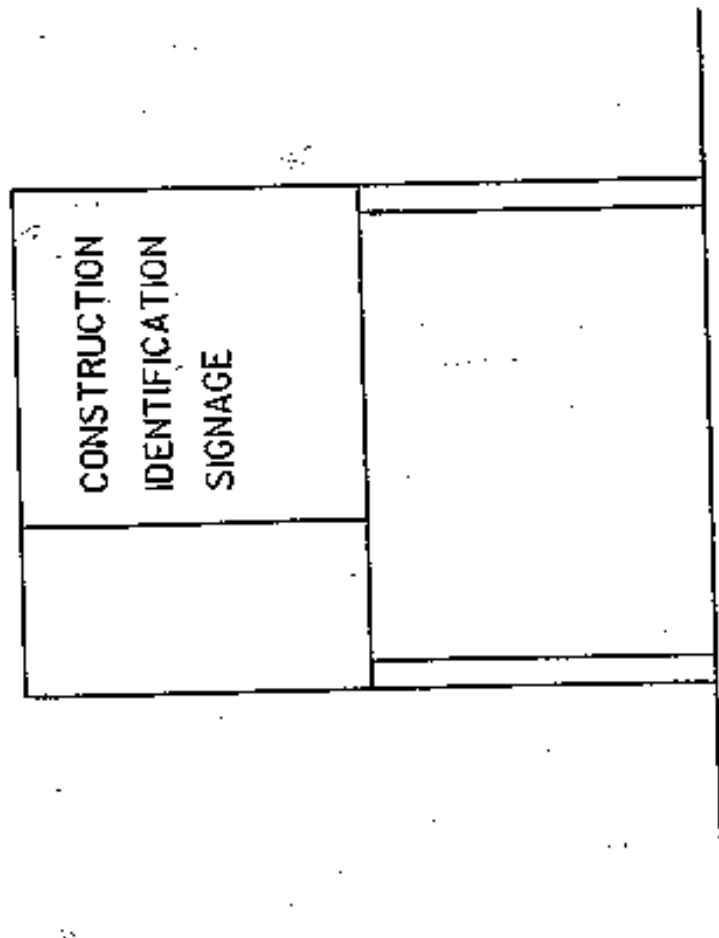
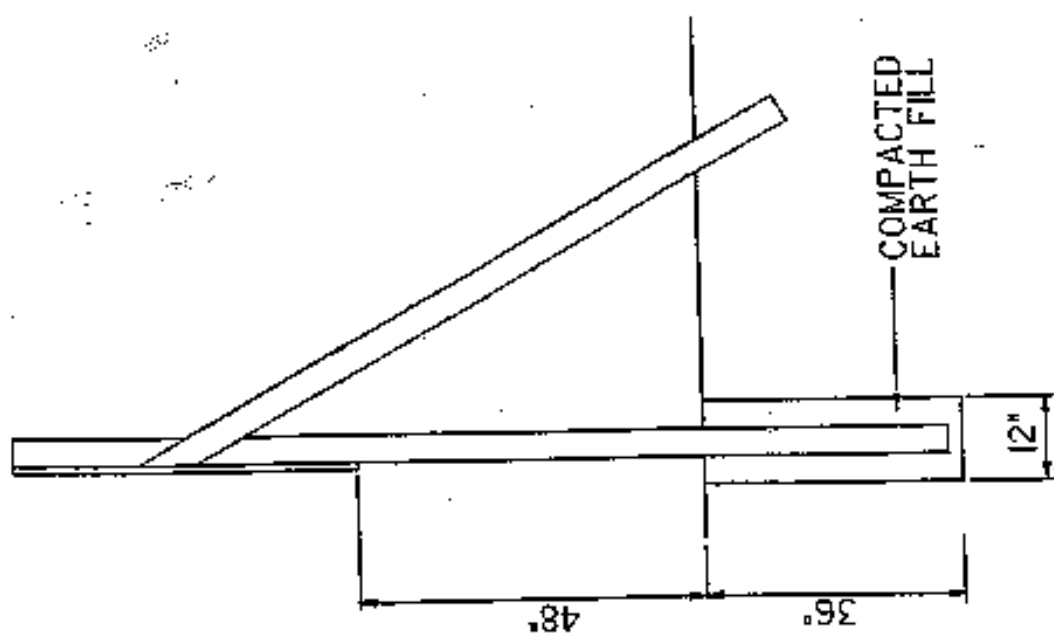
Legend Group 5a: The words:

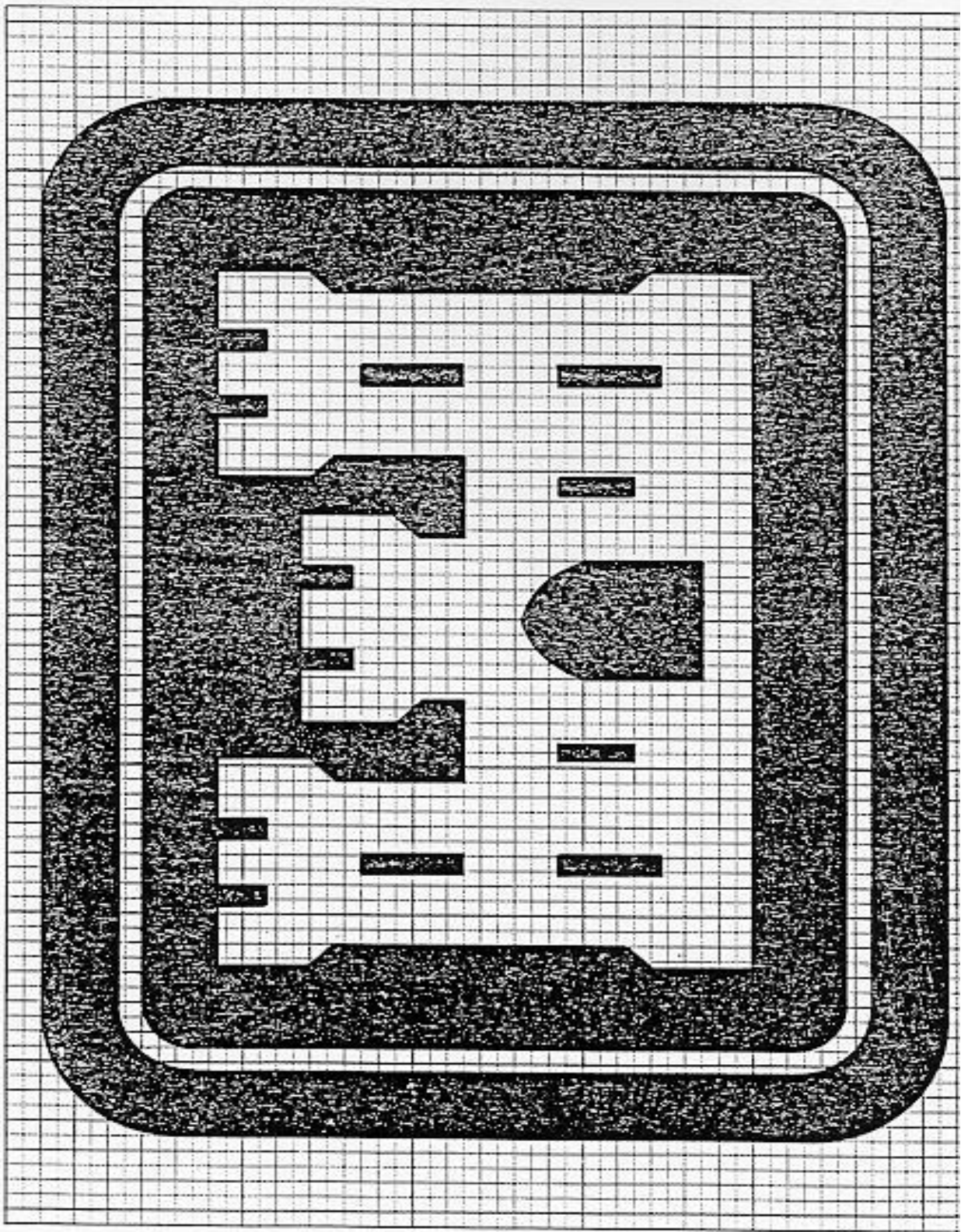
"Architects:" or "Engineers:" or "Architect-Engineers:"

shall be a one to five line identification of the prime architect or engineering corporate or firm name, city, and State. Lettering shall be white, 1.25" Helvetica regular typeface. Maximum line length is 21".

Legend Group 5b: The "Contractor:" shall be a one to five line identification of the prime Contractor corporate or firm name, city, and State. Include type of Contractor, i.e. General Contractor, etc. Lettering shall be white, 1.25" Helvetica regular typeface. Maximum line length is 21".

NOTE: All typography shall be flush left and rag right, upper and lower case with initial capitals only as shown.





CORPS OF ENGINEERS LOGO  
HALF SIZE



FORMAT  
(Ref. FAR 52.236-13 and EM 385-1-1 dated 3 Sep 96)  
ACCIDENT PREVENTION PLAN

MINIMUM BASIC OUTLINE FOR ACCIDENT PREVENTION PLAN

An accident prevention plan is, in essence, a safety and health policy and program document. The following areas are typically addressed in an accident prevention plan, but a plan shall be job specific and shall also address any unusual or unique aspects of the project or activity for which it is written. The accident prevention plan shall interface with the employer's overall safety and health program. Any portions of the overall safety and health program that are referenced in the accident prevention plan shall be included as appropriate.

1. SIGNATURE SHEET. Title, signature, and phone number of the following:

- a. Plan preparer (corporate safety staff person, QC);
- b. Plan approval, e.g., owner, company president, regional vice president (HTRW activities require approval of a Certified Industrial Hygienist (or qualified Industrial Hygiene personnel for in-house USACE activities; a Certified Safety Professional (or qualified USACE safety personnel for in-house work) may approve the plan for operations involving UST removal where contaminants are known to be petroleum, oils, or lubricants);
- c. Plan concurrence (provide concurrence of other applicable corporate and project personnel (contractor)), e.g., Corporate Chief of Operations, Corporate Chief of Safety, Corporate Industrial Hygienist, project manager or superintendent, project safety professional, project QC. The plan will be developed by qualified personnel (plan preparer) and will be signed by a competent person (plan concurrence) and a representative of the prime contractor's project management team (plan approval).

2. BACKGROUND INFORMATION. List the following:

- a. Contractor;
- b. Contract number;
- c. Project name;
- d. Brief project description, description of work to be performed, and location (map);
- e. Contractor accident experience (provide information such as EMR, OSHA 200 Forms, corporate safety trend analyses);
- f. Listing of phases of work and hazardous activities requiring activity hazards analyses.

3. STATEMENT OF SAFETY AND HEALTH POLICY. (In addition to the corporate policy statement, a copy of the corporate safety program may provide a

significant portion of the information required by the accident prevention plan.)

#### 4. RESPONSIBILITIES AND LINES OF AUTHORITIES.

a. Identification and accountability of personnel responsible for safety - at both corporate and project level (contracts specifically requiring safety or industrial hygiene personnel should include a copy of their resume - the District Safety and Occupational Health Office will review the qualifications for acceptance). For items in EM 385-1-1 which require the use of a competent person or a qualified person, the contractor is to maintain documentation demonstrating the competence or qualification of that individual.

b. Lines of authority

#### 5. SUBCONTRACTORS AND SUPPLIERS. Provide the following:

- a. Identification of subcontractors and suppliers (if known);
- b. Means for controlling and coordinating subcontractors and suppliers;
- c. Safety responsibilities of subcontractors and suppliers.

#### 6. TRAINING.

a. List subjects to be discussed with employees in safety indoctrination.

b. List mandatory training and certifications which are applicable to this project (e. g., explosive actuated tools, confined space entry, crane operator, diver, vehicle operator, HAZWOPER training and certification, personal protective equipment) and any requirements for periodic retraining/recertification.

c. Identify requirements for emergency response training.

d. Outline requirements (who attends, when given, who will conduct etc.) for supervisory and employee safety meetings.

e. Identify location at the project site where the records will be maintained.

#### 7. SAFETY AND HEALTH INSPECTIONS. Provide details on:

a. Who will conduct safety inspections (e.g., project manager, safety professional, QC, supervisors, employees, etc.), when inspections will be conducted, how the inspections will be recorded, deficiency tracking system, follow-up procedures, etc;

b. Any external inspections/certifications which may be required (e.g., Coast Guard).

#### 8. SAFETY AND HEALTH EXPECTATIONS, INCENTIVE PROGRAMS, AND COMPLIANCE.

a. The company's written safety program goals, objectives, and accident experience goals for this contract should be provided.

b. A brief description of the company's safety incentive programs (if any) should be provided.

c. Policies and procedures regarding noncompliance with safety requirements (to include disciplinary actions for violation of safety requirements) should be identified.

d. Provide written company procedures for holding managers and supervisors accountable for safety.

9. ACCIDENT REPORTING. The contractor shall identify who shall complete the following, how, and when:

- a. Exposure data (man-hours worked);
- b. Accident investigations, reports and logs;
- c. Immediate notification of major accidents.

10. MEDICAL SUPPORT. Outline on-site medical support and off-site medical arrangements.

11. PERSONAL PROTECTIVE EQUIPMENT. Outline procedures (who, when, how) for conducting hazard assessments and written certifications for use of personal protective equipment.

12. PLANS (PROGRAMS, PROCEDURES) REQUIRED BY THE SAFETY MANUAL (as applicable).

- a. Hazard communication program (01.B.04);
- b. Emergency response plans:
  - procedures and tests (01.E.01)
  - spill plans (01.E.01, 06.A.02)
  - fire fighting plan (01.E.01, 19.A.04)
  - posting of emergency telephone numbers (01.E.04)
  - wildfire prevention plan (09.K.01)
  - man overboard/abandon ship (19.A.04)
- c. Layout plans (04.A.01);
- d. Respiratory protection plan (05.E.01);
- e. Health hazard control program (06.A.02);
- f. Lead abatement plan (06.B.05 & specifications);
- g. Asbestos abatement plan (06.B.05 & specifications);
- h. Abrasive blasting (06.H.01);
- i. Confined space (06.1);
- j. Hazardous energy control plan (12.A.07);
- k. Critical lift procedures (16.C.17);

- 1. Contingency plan for severe weather (19.A.03);
- m. Access and haul road plan (22.1.10);
- n. Demolition plan (engineering and asbestos surveys) (23.A.01);
- o. Emergency rescue (tunneling) (26.A.05);
- p. Underground construction fire prevention and protection plan (26.D.01);
- q. Compressed air plan (26.1.01);
- r. Formwork and shoring erection and removal plans (27.B.02);
- s. Lift slab plans (27.D.01);
- t. SHP and SSHP (for HTRW work an SSHP must be submitted and shall contain all information required by the accident prevention plan - two documents are not required (28.B.01);
- u. Blasting plan (29.A.01);
- v. Diving plan (30.A.13);
- w. Plan for prevention of alcohol and drug abuse (Defense Federal Acquisition Regulation Supplement Subpart 252.223-7004, Drug-Free Work Force).

13. The Contractor shall provide information on how they will meet the requirements of major sections of EM 385-1-1 in the accident prevention plan. Particular attention shall be paid to excavations, scaffolding, medical and first aid requirements, sanitation, personal protective equipment, fire prevention, machinery and mechanized equipment, electrical safety, public safety requirements, and chemical, physical agent, and biological occupational exposure prevention requirements. Detailed site-specific hazards and controls shall be provided in the activity hazard analysis for each phase of the operation. Site-specific hazards are those hazards which would be reasonably be anticipated to occur on the construction site of concern and will be identified through analysis of the activities to be performed. The controls are measures which will be implemented by the contractor to eliminate or reduce each hazard to an acceptable level.

F O R M A T

CONTRACTOR'S NAME  
(Address)

CONSTRUCTION QUALITY CONTROL REPORT

Date: \_\_\_\_\_ Report No. \_\_\_\_\_

Contract No.: \_\_\_\_\_

Description and Location of Work: \_\_\_\_\_

WEATHER: (Clear)(P. Cloudy)(Cloudy); Temperature: \_\_\_\_Min, \_\_\_\_Max;  
Rainfall \_\_\_\_Inches

Contractor/Subcontractors and Area of Responsibility

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_
- g. \_\_\_\_\_
- h. \_\_\_\_\_

1. Work Performed Today:

(Indicate location and description of work performed. Refer to work performed by prime and/or subcontractors by letter in table above.)

\_\_\_\_\_

2. Results of Control Activities:

(Indicate whether: P-Preparatory, I-Initial, or F-Followup and include satisfactory work completed or deficiencies with action to be taken.)

\_\_\_\_\_

3. Test Required by Plans and/or Specifications Performed and Results of Tests:

\_\_\_\_\_

4. Monitoring of Materials and Equipment:

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5. Offsite Surveillance Activities:

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6. Job Safety:

(Daily comment required.)

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7. Remarks:

- a. (Cover any conflicts in plans, specifications or instructions.)
- b. (Action taken in review of submittal.)
- c. (Verbal instructions received.)

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Inspector

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CONTRACTOR'S VERIFICATION:

The above report is complete and correct and all material and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications except as noted above.

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Contractor's Approved  
Authorized Representative

# SAMPLE

## SMALL AND DISADVANTAGED BUSINESS SUBCONTRACTING PLAN

BETTER BUILDERS, INC.

DATE: June 29, 2004

SOLICITATION NO. W912HN-0X-X-XXXX

TITLE: Barracks Complex, Fort Swampy, Georgia

Type of Work: Design and Construction

In accordance with applicable contract clauses of the solicitation noted above, Better Builders, Inc. submits the following Small Business Subcontracting Plan (includes small, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns).

It is company policy to follow all public laws including P.L. 99-661, Section 1207, P.L. 100-180, Section 806, P.L. 105-135 and P.L. 106-50. We have informed all purchasers to follow these laws in hiring subcontractors and buying materials.

1. The following goals (expressed in terms of percentages of the total dollars available for subcontract/purchase order award) would be applicable to a contract awarded under the cited solicitation. You must also provide the dollar amounts for each of the goals listed below.
  - a. Total Proposed Contract Amount: \$26,961,000
  - b. Total amount available for Subcontract award: \$18,300,000
  - c. Large Business: \$7,832,400 – 42.8%
  - d. Total amount to be subcontracted to all small business: \$10,467,600 - 57.2%
  - e. Small Disadvantaged Business: \$1,628,700 – 8.9%
  - f. Women-Owned Small Business: \$1,482,300 – 8.1%
  - g. Service-Disabled Veteran-Owned Small Business: \$549,000 - 3%
  - h. HUBZone Small Business: \$549,000 – 3%

- i. Veteran Owned Small Business: **\*See NOTE below.**
- j. There are no options in this solicitation. (***NOTE: If there are options in the solicitation you must provide the same information as listed in paragraph 1 a-h for each option year/period.***)
- k. Indirect and overhead costs have not been included in the goals specified in this section for amounts available for subcontract/purchase order award.
- l. Consideration was given to HCBU/MI's but no opportunities were found to be included in the small disadvantaged business goals.

**NOTE: \*FAR 52.219-9 requires a goal in your subcontracting plan for Veteran-Owned small business concerns. While Savannah District does not have a specific goal for subcontracting with Veteran-Owned small business, it must be addressed in any subcontracting plan.**

2. The following principal products and/or services will be subcontracted under this contract, and the distribution among all small business concerns are as follows:

|                  | LB | SB | VOSB | SDVOSB | HUBZone | SDB | WOSB |
|------------------|----|----|------|--------|---------|-----|------|
| Windows          |    | X  |      |        |         |     |      |
| Storm Doors      |    | X  |      |        |         |     |      |
| Plumbing         |    | X  |      |        |         |     |      |
| Materials        |    |    | X    |        |         |     |      |
| Equipment        |    |    | X    |        |         |     |      |
| Asphalt          |    |    |      | X      |         |     |      |
| Electrical       |    |    |      | X      |         |     |      |
| Doors            |    |    |      | X      |         |     |      |
| Window Treatment |    |    |      |        | X       |     |      |
| HVAC             |    |    |      |        | X       |     |      |
| Concrete         |    |    |      |        | X       |     |      |
| Vinyl Siding     |    |    |      |        |         | X   |      |
| Insulation       |    |    |      |        |         | X   |      |
| Gutters          |    |    |      |        |         | X   |      |
| Carpentry        |    |    |      |        |         |     | X    |
| Fencing          |    |    |      |        |         |     | X    |

**NOTE: Company names should be provided for each product and/or service listed.**



The following method was used in developing our subcontracting goals: (1) all areas of potential subcontract work were determined to be available for subcontract award to all types of small business concerns, and (2) will be actively recruited for participation through the many sources described hereinafter.

3. The following individual will administer this Subcontract Plan on behalf of Better Builders, Inc.:

Name: Freddie Better

Title: Executive Vice President

Address and Telephone Number: 4845 Tonka Drive  
Fair Haven, CT 27413  
800-621-4845

The individual's specific duties with regard to the conduct of our firm's Subcontracting Plan will include, but will not be limited to the following:

- a. Developing and maintaining bidders lists of all types of small business concerns using sources such as the Dynamic Small Business Search developed by the Small Business Administration, the Minority Business Development Agency of the U.S. Department of Commerce, Local Minority Business Development Centers and Minority Contractor Associations, and the General Business Services Center in the project's Standard Metropolitan Statistical Area.
- b. Assuring the inclusion of all types of small business concerns in all solicitations for products or services which they are capable of providing; and ensuring that all solicitations are structured to permit the maximum possible participation by all types of small business concerns.
- c. Establishing and maintaining records of all solicitations and subcontract awards to all types of small business concerns to ensure that the members of the firm who review bidders proposals document their reasons for selecting or not selecting a bid.
- d. Preparing and submitting the Subcontracting Report for Individual Contracts (SF 294) and the Summary Subcontract Report (SF 295) in accordance with the instructions provided on the forms, and coordinating and preparing for all compliance reviews by Federal agencies.
- e. Conducting or arranging for all other activities necessary to further the intent and attainment of goals of the Plan to include motivational training of the firm's purchasing personnel attendance at workshop, seminars and trade fairs conducted by or on behalf of all types of small business concerns, and general cooperation with members of these concerns or their representatives.

4. The following steps will be taken to ensure that all types of small business concerns receive notice and have an equitable opportunity to compete for intended awards of subcontracts and/or purchase orders for the products and/or services described in paragraph 2 above:

a. Sources will be requested through the Dynamic Small Business Search, business development organizations, small business trade associations and at small business procurement conferences; sources will be contacted and bidding materials will be provided to all responding parties with interest.

b. Internally, motivational training will be conducted to guide and encourage purchasing personnel; source lists and guides to all types of small business concerns will be maintained and utilized by purchasing personnel while soliciting subcontracts and purchase orders; activities will be monitored to ensure sufficient time is allowed for interested bidders to prepare their bids and to evaluate continuing compliance with this Subcontracting Plan.

5. Better Builders, Inc. agrees that the clause entitled "Utilization of Small Business Concerns" will be included in all subcontracts which offer further subcontracting opportunities. All subcontractors, except small business concerns, who receive subcontracts in excess of \$500,000 (\$1,000,000 in the case of construction) will be required to adopt and comply with a subcontracting plan similar to this one. Such plans will be reviewed to assure that all minimum requirements of an acceptable subcontracting plan have been satisfied.

The acceptability of goals shall be determined on a case-by-case basis depending on the supplies/services involved, the availability of all potential small business and prior experience. Once approved and implemented, plans will be monitored through the submission of periodic reports or, as time and availability of funds permit, periodic visits to subcontractor's facilities to review applicable records and subcontracting program progress.

6. Better Builders, Inc. agrees to submit such periodic reports and cooperate in any studies or surveys as may be required by the Contracting agency or the Small Business Administration in order to determine the extent of compliance by the offeror with the subcontracting plan and with the clause entitled "Utilization of Small Business Concerns" contained in the solicitation.

7. Better Builders, Inc. agrees to maintain at least the following types of records to document compliance with this Subcontracting Plan:

a. The names of all organizations, agencies, and associations contacted for all small business sources, along with records of attendance at conferences, seminars and trade fairs where additional sources were developed.

b. Source lists, guides, and other data identifying all types of small business concerns

c. Records on all subcontract solicitations, on a contract-by-contract basis, indicating (1) whether all types of small business concerns were solicited, and if not, why not; and (2) the reasons for the failure of all solicited small businesses to receive a subcontract award.

d. Records of all subcontract award data, to include subcontractor's name and address, to be kept on a contract-by-contract basis.

e. Minutes of internal motivational and training meetings held for the guidance and encouragement of purchasing personnel, and records of all monitoring activities performed for compliance evaluation.

f. Copies of SF 294 and SF 295 showing date and place of filing and copies of all other reports or results of reviews conducted by the contracting agency or other interested agencies of the Federal government to monitor our compliance with this Subcontracting Plan.

In closing Better Builders, Inc. states that it will be the policy of Better Builders, Inc. to afford every practicable opportunity to all types of small business concerns to participate in construction contracts awarded to Better Builders, Inc. by the Federal Government to ensure that equitable opportunity is provided to all types of small business concerns to compete for award of subcontracts and purchase orders, and to diligently pursue the achievement of our goals by participation of all types of small business concerns in the dollars available for subcontract/purchase order award under the solicitation.

BY \_\_\_\_\_

DATE \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title, and Company Name

\_\_\_\_\_  
Contract Specialist

DATE \_\_\_\_\_

Approval Recommended

\_\_\_\_\_  
SADBU

DATE \_\_\_\_\_

Approve/Disapprove

\_\_\_\_\_  
Contracting Officer

DATE \_\_\_\_\_

Approve/Disapprove

\_\_\_\_\_  
Procurement Center Representative  
Small Business Administration

DATE \_\_\_\_\_

WEEKLY TEMPORARY ELECTRICAL INSPECTION

Week ending \_\_\_\_\_

Contract No. \_\_\_\_\_

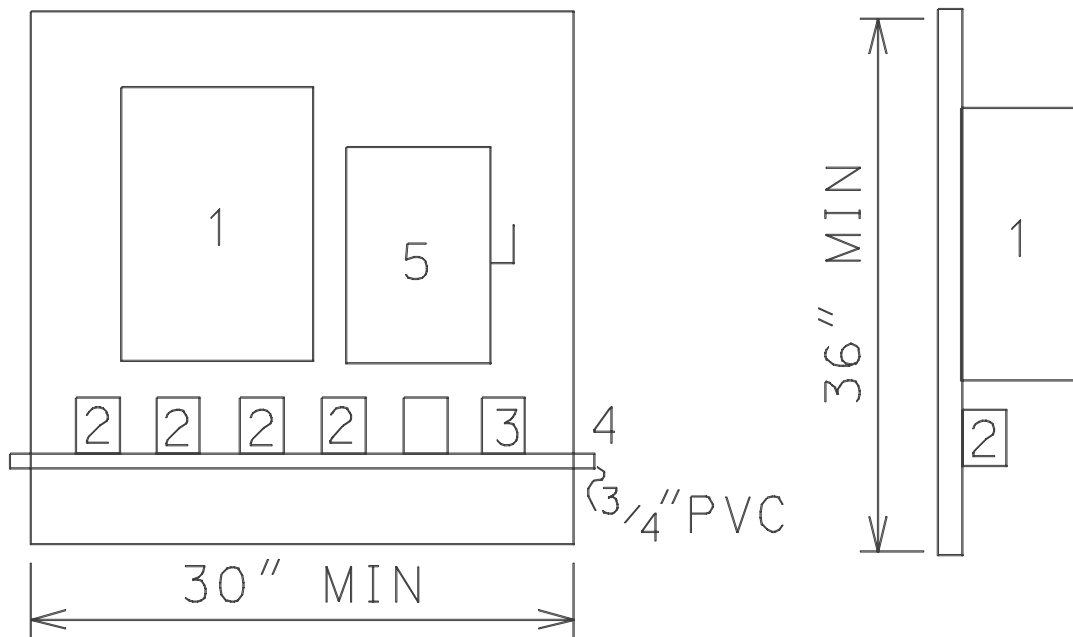
Contract Description \_\_\_\_\_

The following items were inspected in accordance with requirements in National Electrical Code and Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1.

1. Wire (size, type, condition).
2. Systems and devices (polarity, continuity of ground, resistance to ground).
3. Resistance of ground rods (25 OHMS) measured and recorded.
4. Check GFI for 15/20 amp 120 volt circuits.
5. Plugs and receptacles (type, NEMA rating).
6. Circuit breakers and disconnect (size, type, weatherproof).
7. Extension cords (type, UL listed, insulation condition, splices, location).
8. Open wiring on insulators, nonmetallic sheathed cable, outside clearance (600 volts or less), Festoon lighting (as applicable).

\_\_\_\_\_  
Signature Electrician/Electrical Engineer

## MINIMUM STANDARD FOR TEMPORARY ELECTRICAL SERVICE



(DIMENSIONS ARE APPROXIMATE)

A. The backboard for temporary service shall consist of not less than 1/2 inch plywood of exterior grade.

B. Numbers above correspond to the item below:

Item 1 - NEMA 3R circuit breaker type panelboard. This panelboard shall consist of 1 two-pole 60 amp main circuit breaker, 4\* one pole 20 AMP branch circuit breakers, and 1\* two pole 20 AMP branch circuit breaker. Breakers shall meet Federal Specifications Standards for Class 1A breakers and shall be plug-in type. (\*Number of breakers to be adjusted to suit the job requirements.)

Item 2 - Duplex grounding type convenience outlets in standard utility type outlet boxes with covers, meeting the NEC and NEMA requirements for wet locations. Connections to the branch circuit breakers shall be grounded by two conductors #12 NMC cable.

Item 3 - (Optional) A single three-conductor grounding type outlet rated for 250 volt service meeting the NEC and NEMA requirements for wet locations. Connections from this outlet to the two pole breaker shall be by two conductor grounded type NMC cable.

Item 4 - 3/4 inch PVC. This shall be used to support extension cords.

Item 5 - NEMA 3R service disconnect safety switch - 60 amp minimum.

C. The panelboard shall be grounded by #6 copper wire connected to a 3/4 inch by 10-foot long ground rod.

D. Service to the panel shall consist of three copper conductor #6 minimum service entrance cable. This cable may enter the top or side of the panelboard.

E. Periodic inspections of systems and devices will be made by the Contractor at intervals not to exceed 1 week, and a report will be submitted indicating the results.

F. All receptacle outlets that provide temporary electrical power during construction, remodeling, maintenance, repair, or demolition shall have ground-fault circuit-interrupter (GFCI) protection for personnel. GFCI protection shall be provided on all circuits serving portable electric hand tools or semi-portable electric power tools (such as block/brick saws, table saws, air compressors, welding machines, and drill presses). See EM 385-1-1 for exceptions.

G. Per EM 385-1-1 all temporary power distribution systems shall be submitted to the field office before installation.

## ACTIVITY HAZARD ANALYSIS

|   |                             |                         |
|---|-----------------------------|-------------------------|
| 1. Phase of Construction                      |                             |                         |
| 2. Location                                   | 3. Contract No.             | 4. Project              |
| 5. Prime Contractor                           | 6. Date of Preparatory      | 7. Estimated Start Date |
| Potential Safety Hazard                       | Procedure to Control Hazard |                         |
|   |                             |                         |
| 8. Contractor's Representative<br>(signature) | 9.                          |                         |



# SAFETY CHECKLIST FOR CRAWLER-, TRUCK-, WHEEL-, AND RINGER-MOUNTED CRANES

|   |  |                 |           |
|---|--|-----------------|-----------|
| Contract # and title:   |  |                 |           |
| Equipment name & number:<br>owned or leased?  |  |                 |           |
| Contractor:   |  | Subcontractor:  |           |
| Contract Inspector:   |  | Date inspected: |           |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  |  | <b>Yes</b>      | <b>No</b> |
| 1. Unless the manufacture has specified an on-rubber rating, outriggers will be fully extended and down? (16.D.10)  |  |                 |           |
| 2. Are lattice boom cranes equipped with a boom angle indicator, load indicating device, or a load moment indicator? (16.D.01)  |  |                 |           |
| 3. Are lattice boom and hydraulic cranes equipped with a means for the operator to visually determine levelness? (16.D.02)  |  |                 |           |
| 4. Are lattice boom and hydraulic cranes, except articulating booms cranes, equipped with drum rotation indicators located for use for the operator? (16.D.03)  |  |                 |           |
| 5. Are lattice boom and hydraulic mobile cranes equipped with a boom angle or radius indicator within the operator's view? (16.D.04)  |  |                 |           |
| 6. Are lattice boom cranes, with exception of duty cycle cranes, equipped with an anti-two blocking device? (16.D.04)   |  |                 |           |
| 7. When duty cycle machines are required to make a non-duty lift, is the crane equipped with an international orange warning device and is a signal person present? (16.D 05)   |  |                 |           |
| 8. Are the following with the crane at all times: (16.C.02)<br>a. The manufacturer's operating manual?<br>b. The load-rating chart?<br>c. The crane's logbook documenting use, maintenance, inspections and tests?<br>d. Operating manual for crane operator aids used on the crane.  |  |                 |           |
| 9. Are the following on the project site:<br>a. Completed periodic inspection report prior to initial work? (16.C.12)<br>b. Pre-operational checklist used for daily inspection? (16.C.12)<br>c. Written reports of the operational performance test? (16.C.13)<br>d. Written reports of the load performance test? (16.C.13) |  |                 |           |
| 10. Are all operators physically qualified to perform work? (16.C.05)   |  |                 |           |
| 11. Are all operators qualified by written/oral and practical exam or by appropriate licensing agency for the type crane they are to operate? (16.C.05)   |  |                 |           |
| 12. Is the crane designed and constructed IAW the standards listed in Table 16-1? (16.C.06)   |  |                 |           |
| 13. Is a hazard analysis for set-up and set-down available? (16.C.08)   |  |                 |           |

# SAFETY CHECKLIST FOR CRAWLER-, TRUCK-, WHEEL-, AND RINGER-MOUNTED CRANES

| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
|--|------------|-----------|------------|
| 14. Are accessible areas within the swing radius of the rear of the crane barricaded? (16.C.09)  |            |           |            |
| 15. Are there at least 3 wraps of cable on the drum? (16.C.10)   |            |           |            |
| 16. Are the hoisting ropes installed IAW the manufacturer's recommendations? (16.C.10)   |            |           |            |
| 17. Are critical lift plans available? (16.C.18)   |            |           |            |
| 18. Are minimum clearance distance for high voltage lines posted at the operator's position? (11.E.04)   |            |           |            |
| 19. Do older lattice boom cranes with anti-two block warning devices in lieu of anti-two block devices have manually activated friction brakes? (16.D.05)                                    |            |           |            |
| 20. Is the slow moving emblem used on all vehicles which by design move at 25 MPH or less on public roads? (08.A.04)   |            |           |            |
| 21. Are all vehicles which will be parked or moving slower than normal traffic on haul roads equipped with a yellow flashing light or flasher visible from all directions? (16.A.13)         |            |           |            |
| 22. Is all equipment to be operated on public roads provided with: (16A.07)<br>a. Headlights?<br>b. Brake lights?<br>c. Taillights?<br>d. Back-up lights?<br>e. Front and rear turn signals? |            |           |            |
| 23. Are seat and seat belts provided for the operator and each rider on equipment? (16.A.07 and 16.B.08)   |            |           |            |
| 24. Is all equipment with windshields equipped with powered wipers and defogging or defrosting devices? (16.A.07)  |            |           |            |
| 25. Is the glass in the windshield or other windows clear and unbroken to provide adequate protection and visibility for the operator? (16.A.07, 16.B.10)                                    |            |           |            |
| 26. Is all equipment equipped with adequate service brake system and emergency brake system? (16.A.18)   |            |           |            |
| 27. Are areas on equipment where employees walk or climb equipped with platforms, foot walks, steps, handholds, guardrails, toeboards and non-slip surfaces? (16.B.03)                       |            |           |            |
| 28. Is all self-propelled equipment equipped with automatic, audible, reverse signal alarms? (16.B.01)   |            |           |            |
| 29. Is there a record of manufacturer's approval of any modification of equipment which affects its capacity or safe operation? (16.A.19)  |            |           |            |
| 30. Are truck and crawler cranes attached to a barge or pontoon by means of a tie-down system with some slack? Movement during lifting is not permitted. (16.F.08)                           |            |           |            |

# SAFETY CHECKLIST FOR CRAWLER-, TRUCK-, WHEEL-, AND RINGER-MOUNTED CRANES

| This checklist references EM 385 1-1, revised 3 November 2003   | Yes | No | N/A |
|---|-----|----|-----|
| 31. Have the following conditions been met for land cranes mounted on barges or pontoons: (16.F.06)<br>a. Have load ratings been modified to reflect the increased loading from list, trim, wave, and wind action?<br>b. Are all deck surfaces above the water?<br>c. Is the entire bottom area of the barge or pontoon submerged?<br>d. Are tie downs available?<br>e. Are cranes blocked and secured? |     |    |     |
| 32. Are all belts, gears, shafts, spindles, drums, flywheels, or other rotating parts of equipment guarded where is a potential for exposure to workers? (16.B.03)  |     |    |     |
| 33. Is the area where the crane is to work level, firm and secured? (16.A.10)   |     |    |     |
| 34. Is a dry chemical or carbon dioxide fire extinguisher rated at least 5-B:C on the crane? (16.A.34)  |     |    |     |
| 35. Are trucks, for truck-mounted cranes, equipped with a working reverse signal alarm? (16.B.01)   |     |    |     |
| 36. Is a signal person provided where there is danger from swinging loads, buckets, booms, etc.? (16.B.02)  |     |    |     |
| 37. Is there adequate clearance from overhead structures and electrical sources for the crane to be operated safely? (16.C.09)  |     |    |     |
| 38. Is there adequate lighting for night operations? (16.C.19)  |     |    |     |
| 39. Has the boom stop test on cable-supported booms been performed? (16.D.06)   |     |    |     |
| 40. Is the boom disengaging device functioning as required? (16.D.06)   |     |    |     |
| 41. Has all rigging and wire rope been inspected? (Section 15)  |     |    |     |
| 42. Remarks:(Enter actions taken for all “no” answers.)   |     |    |     |

# SAFETY CHECKLIST FOR CRAWLER-, TRUCK-, WHEEL-, AND RINGER-MOUNTED CRANES

|   |  |  |  |
|---|--|--|--|
| 42. (cont.) Remarks:(Enter actions taken for all “no” answers.)   |  |  |  |
|   |  |  |  |
| This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard. |  |  |  |
| Contractor inspector signature  |  |  |  |
| Contractor QC/safety officer/project manager signature  |  |  |  |

## SAFETY CHECKLIST FOR CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

|  |  |                 |           |
|--|--|-----------------|-----------|
| Contractor # and title:  |  |                 |           |
| Equipment name & number:<br>Owned or leased?   |  |                 |           |
| Contractor:  |  | Subcontractor:  |           |
| Contractor inspector:  |  | Date inspected: |           |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   |  | <b>Yes</b>      | <b>No</b> |
| 1. Has the hazardous emergency control plan been submitted to the designated authority for acceptance? (12.D.02)   |  |                 |           |
| 2. Do systems with energy isolating devices which are capable of being locked out utilize locking devices to control hazardous energy? (12.D.06)   |  |                 |           |
| 3. If locking devices are not used, have the following criteria been met?<br>a. The use of locking control devices would entail burdens that exceed any advantage to the use of tag out devices?<br>b. The use of tag out devices will provide full employees protection?<br>c. All affected employees can and will be informed that tag out is being used in lieu of lockout? (12.D.06) |  |                 |           |
| 4. Does the aforementioned plan clearly and specifically outline the scope, purpose, authorization, rules and techniques to be utilized? (12.A.07)   |  |                 |           |
| 5. Has training been conducted to ensure employees understand the hazardous energy procedures and possess the knowledge and skills required for the safe application, usage, and removal of emergency controls? (12.B.01)  |  |                 |           |
| 6. Have daily inspections been conducted and documented to ensure all requirements of the hazardous energy procedures are being followed? (12.C)   |  |                 |           |
| 7. Are lockout and tagout devices capable of withstanding the environments to which they are exposed for the maximum period of time the exposure is expected and do they identify the employee applying the device? (12.D.01)  |  |                 |           |
| 8. In addition to the requirements established in 12.D.01, are lockout devices substantial enough to prevent removal without the use of excessive force or unusual techniques? (12.D.02)   |  |                 |           |
| 9. Do tagout devices meet the following requirements: (12.D.03a-d)<br>a. Have a standardized (with a project) printed format<br>b. Constructed and printed so that exposure to weather conditions, wet or damp locations, or corrosive environments will not cause the tag to deteriorate or the message to become illegible.  |  |                 |           |

## SAFETY CHECKLIST FOR CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

| This checklist references EM 385 1-1, revised 3 November 2003  |  | Yes | No | N/A |
|--|--|-----|----|-----|
| 9. (cont.) Do tagout devices meet the following requirements: (12.D.03a-d)   |  |     |    |     |
| a. Attached by means of a non-releasable, substantial enough to prevent removal, attachable by hand, self-locking, non-releasable, with a minimum strength 50 lbs. And, be at least equivalent to a one-piece, nylon tie.  |  |     |    |     |
| b. Warn against the hazardous condition resulting from system energization and include a legend such as <b>DO NOT START, DO NOT OPEN, DO NOT CLOSE, DO NOT ENERGIZE, DO NOT OPERATE, etc.</b>  |  |     |    |     |
| 10. Remarks: (Enter actions taken for “no” answers)  |  |     |    |     |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |  |     |    |     |
| Contractor inspector signature   |  |     |    |     |
| Contractor QC/safety officer/project manager signature   |  |     |    |     |

# **SAFETY CHECKLIST FOR CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)**

# SAFETY CHECKLIST FOR MOTOR VEHICLES, TRAILERS, AND TRUCKS

|  |                 |           |            |
|--|-----------------|-----------|------------|
| Contract # and title:<br>Owned or leased?  |                 |           |            |
| Equipment name & number:   |                 |           |            |
| Contractor:  | Subcontractor:  |           |            |
| Contractor inspector:  | Date inspected: |           |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b>      | <b>No</b> | <b>N/A</b> |
| 1. Are records of safety inspections of all vehicles available? (18.A.02)  |                 |           |            |
| 2. Are all vehicles to be operated between sunset and sunrise equipped with: (18.A.04)<br>a. 2 headlights?<br>b. Taillights and brake lights?<br>c. Front and back turn signals?<br>d. 3 emergency flares, reflective markers, or equivalent portable warning devices?   |                 |           |            |
| 3. Are vehicles, except trailers or semi-trailers having a gross weight of 5000 lbs or less, equipped with service brakes and manually operated parking brakes? (18.A.05)  |                 |           |            |
| 4. Are service brakes on trailers and semitrailers controlled from the driver's seat of the prime mover? (18A.05)  |                 |           |            |
| 5. Does the vehicle have: (18.A.06)<br>a. An operable speedometer?<br>b. An operable fuel gage?<br>c. An operable audible warning device (horn)?<br>d. A windshield & adequate windshield wiper?<br>e. An operable defroster and defogging device?<br>f. An adequate rearview mirror?<br>g. A cab, cab shield, and other protection to protect the driver from the elements and falling or shifting materials?<br>h. Non-slip surfaces on steps?<br>i. A power-operated starting device? |                 |           |            |
| 6. Is all the glass safety glass and is all broken or cracked glass replace? (18.A.07)   |                 |           |            |
| 7. Do trailers meet the following: (18A.08)<br>a. Are all towing devices adequate for the weight drawn?<br>b. Are all towing devices properly mounted?<br>c. Are locking devices or a double safety system provided on every 5th wheel mechanism and tow bar arrangement to prevent accidental separation?   |                 |           |            |



# SAFETY CHECKLIST FOR MOTOR VEHICLES, TRAILERS, AND TRUCKS

| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
|--|------------|-----------|------------|
| 7. (cont.) Do trailers meet the following: (18A.08)<br>a. Are all towing devices adequate for the weight drawn?<br>b. Are all towing devices properly mounted?<br>c. Are locking devices or a double safety system provided on every 5th wheel mechanism and tow bar arrangement to prevent accidental separation?<br>d. Are trailers coupled with safety chains or cables to the towing vehicle?<br>e. Are trailers equipped with the power brakes equipped with a breakaway device which will lock-up the brakes in the event the trailer separates from the towing vehicle? |            |           |            |
| 8. Are all dump trucks:(18.A.10)<br>a. Equipped with a holding device to prevent accidental lowering of the body?<br>b. Equipped with a hoist lever secured to prevent accidental starting or tipping?<br>c. Equipped with means to determine (from the operator's position) if the dump box is lowered?<br>d. Equipped with trip handles for tailgates that allows the operator to be clear?  |            |           |            |
| 9. Are all buses, trucks and combination of vehicles with a carrying capacity of 1.5 tons or more, to be operated on public roads equipped with: (18.A.11)<br>a. 3 reflective markers?<br>b. 2 wheel chocks for each vehicle?<br>c. At least one 2A:10B:C fire extinguisher?<br>d. At least two properly rated fire extinguishers (for vehicles carrying flammable cargo)?<br>e. A red flag not less than 1-foot square.   |            |           |            |
| 10. Is vehicle exhaust controlled so as not to present a hazard to personnel? (18.A.13)  |            |           |            |
| 11. Are all rubber tired motor vehicles equipped with fenders or with mud flaps if the vehicle is not designed for fenders? (18.A.14)  |            |           |            |
| 12. Are all vehicles, except buses, equipped with seat belts? (18.B.02)  |            |           |            |
| 13. Does all self-propelled construction and industrial equipment have a working reverse signal alarm? (16.B.01)   |            |           |            |
| 14. Are all hot surfaces of equipment, including exhaust pipes or other lines, guarded or insulated to prevent injury or fire? (16.B.03)   |            |           |            |
| 15. If an off the road vehicle, is it equipped with rollover protective structures? (16.B.12)  |            |           |            |

## SAFETY CHECKLIST FOR MOTOR VEHICLES, TRAILERS, AND TRUCKS

| This checklist references EM 385 1-1, revised 3 November 2003  | Yes | No | N/A |
|--|-----|----|-----|
| 16. Remarks: (Enter actions taken for “no” answers)  |     |    |     |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |     |    |     |
| Contractor inspector signature   |     |    |     |
| Contractor QC/safety officer/project manager signature   |     |    |     |

# SAFETY CHECKLIST FOR SAFE ACCESS AND FALL PROTECTION

|   |  |                 |           |            |
|---|--|-----------------|-----------|------------|
| Contractor # and title:   |  |                 |           |            |
| Equipment name & number:<br>Owned or leased?  |  |                 |           |            |
| Contractor:   |  | Subcontractor:  |           |            |
| Contractor inspector:   |  | Date inspected: |           |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  |  | <b>Yes</b>      | <b>No</b> | <b>N/A</b> |
| 1. Is each employee who might be exposed to fall hazards trained by a competent person qualified in the following areas, in the safe use of access ways and fall protection systems and the recognition of hazards related to their use, including: <ul style="list-style-type: none"> <li>a. Nature of access and fall hazards in the work area?</li> <li>b. Correct procedures for constructing, erecting, maintaining, using, dismantling access ways and fall protection?</li> <li>c. Maximum intended load carrying capacities?</li> <li>d. Mechanical equipment limitations during roofing work on low-sloped roofs?</li> <li>e. Rescuer equipment and procedures? (21.A.16)</li> </ul> |  |                 |           |            |
| 2. Are the manufacture's recommendations followed in the fitting, adjusting, replacement, inspecting, testing, and care of personal fall protective equipment? (21.C.06)  |  |                 |           |            |
| 3. Is personal fall protection equipment inspected by the worker prior to each use to determine that it is in a safe working condition? (21.C.07)   |  |                 |           |            |
| 4. Is personal fall protection equipment inspected by competent person at last once semi-annually and whenever subject to severe use; defective equipment shall be immediately replaced? (21.C07)   |  |                 |           |            |
| 5. Are body belts prohibited from use except as positioning and restraint systems only? (05.F.01a)  |  |                 |           |            |
| 6. Are harness lanyards looped back over or through a large object and then attached back to themselves unless permitted by the manufacturer? (05.F.03)   |  |                 |           |            |
| 7. When vertical lifelines are used, is each employee attached to a separate lifeline? (21.C.09a)   |  |                 |           |            |
| 8. Are anchorages used for attachment of personal fall arrest equipment independent of any anchorage used to support or suspend platforms and are they capable of supporting at least 2,270 kg (5,000 lb) per employee attached? ? (21.C.11c)   |  |                 |           |            |
| 9. Are safety nets and safety net installations tested in the suspended position immediately after installation and before being used as a fall protection system?  |  |                 |           |            |

## SAFETY CHECKLIST FOR SAFE ACCESS AND FALL PROTECTION

| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
|--|------------|-----------|------------|
| 10. Prior to commencing any activity which requires work in elevated areas, have all provisions for access and fall protection been delineated in the hazard analysis and accepted by the GDA? (22.A.03)   |            |           |            |
| 11. Is each person supported by a suspended scaffold protected by a Type 1 body belt or body harness system? (22.E.15)   |            |           |            |
| 12. Are workers provided fall protection whenever they are exposed to falls of 1.8 m (6 ft) or greater? (27.E.06)  |            |           |            |
| 13. Remarks: (Enter actions taken for “no” answers)  |            |           |            |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |            |           |            |
| Contractor inspector signature   |            |           |            |
| Contractor QC/safety officer/project manager signature   |            |           |            |

# SAFETY CHECKLIST FOR SCAFFOLDS – OTHER TYPES

|  |            |                 |            |
|--|------------|-----------------|------------|
| Contractor # and title:  |            |                 |            |
| Equipment name & number:<br>Owned or leased?   |            |                 |            |
| Contractor:  |            | Subcontractor:  |            |
| Contractor inspector:  |            | Date inspected: |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b>       | <b>N/A</b> |
| 1. Does the scaffold have a standard guardrail system? (21.B)  |            |                 |            |
| 2. Are scaffolds and their components capable of supporting without failure at least 4 times the maximum anticipated load? (22.B.01(a))  |            |                 |            |
| 3. Are scaffolds plumb and level? (22.B.03)  |            |                 |            |
| 4. Do scaffolds (other than suspended scaffolds) bear on base plates upon sills or other adequate foundation? (22.B.04)  |            |                 |            |
| 5. all planking overlapped or secured from movement? (22.B.06(e))  |            |                 |            |
| 6. Do scaffolds planks extend over their end supports not less than 6 inches (unless planking is manufactured with restraining hooks or equivalent means) nor more than 12 inches? (22.B.06) |            |                 |            |
| 7. Is planking supported or braced to prevent excessive spring or deflection and secured and supported to prevent loosening tipping, or displacement? (22.B.06(e))                           |            |                 |            |
| 8. Has a ladder or equivalent safe access been provided? (22.B.08(a))  |            |                 |            |
| 9. In a built-in ladder is part of a scaffold system, does it conform to the requirements for ladders? (22.B.08(b))  |            |                 |            |
| 10. Has a ladder or equivalent safe access been provided? (22.B.08(a))   |            |                 |            |
| 11. When the scaffold height exceeds 4 times the minimum scaffold base dimension, is the scaffold secured to the wall or structure? (22.B.09)  |            |                 |            |
| 12. Is the use of brackets on scaffolds prohibited unless the tipping effect is controlled? (22.B.10)  |            |                 |            |
| 13. Are all scaffolds 60 feet or less in height constructed in accordance with Table 22-1?   |            |                 |            |
| 14. Where wood poles are spliced are the ends squared and the upper section rests squarely on the lower section? (22.D.03(a))  |            |                 |            |
| 15. Are ledgers long enough to extend over a minimum of two poles and reinforced by bearing blocks nailed to the side of the pole to form a support for the ledger (22.D.04(c))?             |            |                 |            |
| 16. Are independent pole scaffolds set as near to the wall of the building as possible? (22.A.05)  |            |                 |            |
| 17. Is each person supported by a suspended scaffold protected by a Type 1 body belt or body harness system? (22.E.15)   |            |                 |            |
| 18. Do all parts of suspended scaffold, hoist, ropes, brakes, and anchorages been inspected prior to being placed in services? (22.E.04)   |            |                 |            |

## SAFETY CHECKLIST FOR SCAFFOLDS – OTHER TYPES

| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
|--|------------|-----------|------------|
| 19. Are outrigger beams made of structural metal and restrained to prevent movement? (22.E.02)   |            |           |            |
| 20. Does each hoist have a name plate with the manufactures name, maximum load rating, identification number, and wire rope specifications? (22.E.08(b))   |            |           |            |
| 21. Are suspended scaffolds guyed, braced, guided, or equipped with a tag line to prevent swaying? (22.E.10)   |            |           |            |
| 22. Are two-point suspension scaffold platforms between 20 and 36 inches wide and securely fastened to the hangers? (22.E.11(a))   |            |           |            |
| 23. Is each person supported by a suspended scaffold protected by a body harness system attached by a lanyard to a lifeline, trolley line, or scaffold structural member? (22.E.15)  |            |           |            |
| 24. Is each bracket, except for wooden bracket form scaffolds, attached to the supporting formwork or structure supporting member, or form carpenter's bracket scaffolds only, by a bolt extending through to the opposite side of the structure's wall? (22.H.01)                                     |            |           |            |
| 25. Are horse scaffold constructed or arranged in two tiers or less? (22.H.01)   |            |           |            |
| 26. Do pump jack scaffolds carry a working load of 500 pounds or less (22.I.01)  |            |           |            |
| 27. Are crane supported work platforms used only when the erection, use and dismantling of conventional means of scaffold reaching work site, such as a personnel hoist, ladder, stairway, or scaffold would be more hazardous or is not possible because of structural design or work site? (22.F.01) |            |           |            |
| 28. Has the person responsible for the lift prepared an AHA and attested to the need for the operation in writing? (22.F.01)   |            |           |            |
| 29. Has the person responsible for the lift signed the AHA and submitted it to the GDA for acceptance? (22.F.01)   |            |           |            |
| 30. Remarks: (Enter actions taken for "no" answers)  |            |           |            |

## SAFETY CHECKLIST FOR SCAFFOLDS – OTHER TYPES

|   |  |  |  |
|---|--|--|--|
| 30. (cont.) Remarks: (Enter actions taken for “no” answers)   |  |  |  |
|   |  |  |  |
| This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard. |  |  |  |
| Contractor inspector signature  |  |  |  |
| Contractor QC/safety officer/project manager signature  |  |  |  |

# SAFETY CHECKLIST FOR CRAWLER TRACTORS AND DOZERS

|  |            |                 |            |
|--|------------|-----------------|------------|
| Contract # and title:  |            |                 |            |
| Equipment name & number:<br>Owned or leased?   |            |                 |            |
| Contractor:  |            | Subcontractor:  |            |
| Contractor inspector:  |            | Date inspected: |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b>       | <b>N/A</b> |
| 1. Are initial and daily/shift inspection records available? (16.A.01& .02)  |            |                 |            |
| 2. Are only qualified operators assigned to operate mechanized equipment? (16.A.04)  |            |                 |            |
| 3. Are sufficient lights provided for night operations? (16.A.11)  |            |                 |            |
| 4. Is the unit shut down before refueling? (16.A.14)   |            |                 |            |
| 5. Does the unit have as a minimum a 5-B:C fire extinguisher? (16.A.34)  |            |                 |            |
| 6. Is there an effective, working reverse alarm? (16.B.01)   |            |                 |            |
| 7. Are moving parts, shafts, sprockets, belts, etc., guarded? (16.B.03 ,07, and 13)  |            |                 |            |
| 8. Is protections against hot surfaces, exhausts, etc., provided? (16.B.03 and .13)  |            |                 |            |
| 9. Are fuel tanks located in a manner to prevent spills or overflows from running onto engine exhaust or electrical equipment? (16.B.04) |            |                 |            |
| 10. Are exhaust discharges directed so they do not endanger person of obstruct operator vision? (16.B.05)                                |            |                 |            |
| 11. Are seat belts provided? (16B.08)  |            |                 |            |
| 12. Is protection (grills, canopies, screens) provided to shield operator from falling or flying objects? (16.B.10 and .11)              |            |                 |            |
| 13. Is roll over protection provided? (16.B.12)  |            |                 |            |
| 14. Remarks: (Enter actions taken for “no” answers)  |            |                 |            |



## SAFETY CHECKLIST FOR CRAWLER TRACTORS AND DOZERS

| This checklist references EM 385 1-1, revised 3 November 2003  | Yes | No | N/A |
|--|-----|----|-----|
| 14. (cont.) Remarks: (Enter actions taken for “no” answers)  |     |    |     |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |     |    |     |
| Contractor inspector signature   |     |    |     |
| Contractor QC/safety officer/project manager signature   |     |    |     |

## SAFETY CHECKLIST FOR CUTTING/WELDING OPERATIONS

|  |  |                 |           |            |
|--|--|-----------------|-----------|------------|
| Contractor # and title:  |  |                 |           |            |
| Equipment name & number:<br>owned or leased?   |  |                 |           |            |
| Contractor:  |  | Subcontractor:  |           |            |
| Contractor inspector:  |  | Date inspected: |           |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   |  | <b>Yes</b>      | <b>No</b> | <b>N/A</b> |
| 1. Is a compatible fire extinguisher immediately available? (10.C.01)  |  |                 |           |            |
| 2. Is the area free of combustible materials, explosive atmosphere (flammable gases, liquids, etc.) or oxygen-enriched atmosphere? (10.C.02)   |  |                 |           |            |
| 3. Are workers and the public shielded from rays, flashes, sparks, molten metal and slag? (10.C.04)  |  |                 |           |            |
| 4. Are all passageways, ladders, stairways, etc. kept clear of hoses or cables? (10.A.05)  |  |                 |           |            |
| 5. Are electrical welding units, shutdown when unattended? (10.E.11)   |  |                 |           |            |
| 6. Are the frame of arc welding and cutting machines grounded? (10.E.04)   |  |                 |           |            |
| 7. Are cable free of splices or repaired insulation within 10 feet of the rod holder? (10.E.03)  |  |                 |           |            |
| 8. Have welding leads been checked to ensure there is no contact with the metal parts or the support suspended scaffolds? (10.E.09)  |  |                 |           |            |
| 9. Are torch valves and gas supply shut off when work is suspended (10.D.06)?  |  |                 |           |            |
| 10. When work is suspended, are torches, hoses, etc, removed from confined spaces? Tanks are prohibited in confined spaces (10.D.06)   |  |                 |           |            |
| 11. When cylinders are stored, in transit are the regulators removed and protective caps installed? (20.D.07)  |  |                 |           |            |
| 12. Are all compressed gas cylinders secured upright position at all times, except when being hoisted? (20.D.10)   |  |                 |           |            |
| 13. Are upright cylinders secured in racks or hand trucks? (20.D.03)   |  |                 |           |            |
| 14. Are cylinders stored in well ventilated locations, segregated by gas type, and away from flammable and combustible materials? (20.D.03)  |  |                 |           |            |
| 15. Are oxygen cylinders in storage and fuel gases separated by a fire resistive wall or by a distance of 20 feet? (20.D.03)   |  |                 |           |            |
| 16. Are "No Smoking" signs posted around cylinders storage areas? (20.D.03)  |  |                 |           |            |
| 17. Have oxyfuel or other gas-oxygen cutting and welding systems been equipped with reverse-flow check valves and flame arrestor in each hose between the torch and the regulator? (10.S.07) |  |                 |           |            |
| 18. Is a pressure gauge provided on all pressurized equipment and system?  |  |                 |           |            |

| This checklist references EM 385 1-1, revised 3 November 2003  | Yes | No | N/A |
|--|-----|----|-----|
| 19. Remarks: (Enter actions taken for “no” answers)  |     |    |     |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |     |    |     |
| Contractor inspector signature   |     |    |     |
| Contractor QC/safety officer/project manager signature   |     |    |     |

# SAFETY CHECKLIST FOR DEMOLITION OPERATIONS

|   |            |                 |            |
|---|------------|-----------------|------------|
| Contract # and title:   |            |                 |            |
| Equipment name & number:<br>Owned or leased?  |            |                 |            |
| Contractor:   |            | Subcontractor:  |            |
| Contractor inspector:   |            | Date inspected: |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  | <b>Yes</b> | <b>No</b>       | <b>N/A</b> |
| 1. Prior to initiating demolition activities has a demolition plan and engineering asbestos, and lead surveys been completed by a Registered Professional Engineer? (23.A.01)   |            |                 |            |
| 2. Have all electric, gas, water, steam, sewer, and other service lines been shut off, capped or otherwise controlled outside the building line before demotion is started? (23.A.02)   |            |                 |            |
| 3. Has it been determined if any hazardous building materials, hazardous chemicals, gases, explosives, flammable materials, or hazardous substances have been used in any building construction, pipes, tanks, or other cause, have the floors and walls been shored or braced? (23.A.03) |            |                 |            |
| 4. Have test results been provided to the GSA and Contractor's designed authority? (23.A.03)  |            |                 |            |
| 5. When employees work within a structure to be demolished which has been damaged by fire, flood, explosion, or other cause, have the floor and walls been shored or braced? (23.A.04)  |            |                 |            |
| 6. Has each story of exterior wall and floor been removed or dropped into the storage space below before commencing the removal of exterior walls and floors in the next story below? (23.A.05)   |            |                 |            |
| 7. Is everyone protected from the fragmentation of glass? (23.A.06)   |            |                 |            |
| 8. Have employee entrances to multistory structures being demolished been protected by sidewalk sheds, canopies, or both? (23.A.08)   |            |                 |            |
| 9. Is the designated means of access indicated on the demolition plan? (23.A.09)  |            |                 |            |
| 10. Are continuing inspections by a competent person being conducted during demolition to detect hazards resulting from weakened or deteriorated floors, walls or loosened material? (23.A.10)  |            |                 |            |
| 11. Are chute opening into which debris is dumped protected by a guardrail 42 inches above the floor or other surface on which personnel stand to dump the material? (23.B.01)  |            |                 |            |
| 12. Are signed warning of the hazard of failing materials posted at each side of the debris opening at each floor? (23.B.02)  |            |                 |            |
| 13. Has a competent person been assigned to control operation of the chute gate and the backing and loading of trucks? (23.B.04)  |            |                 |            |

# SAFETY CHECKLIST FOR DEMOLITION OPERATIONS

| This checklist references EM 385 1-1, revised 3 November 2003  | Yes | No | N/A |
|--|-----|----|-----|
| 14. Is the area surrounding the discharge end of the chute closed when operations are not in progress? (23.B.05)   |     |    |     |
| 15. Are chutes designed and constructed of such strength so to eliminate failure due to impact of materials or debris loaded therein? (23.B.07)              |     |    |     |
| 16. Do floor openings have curbs or stop-logs to prevent equipment from running over the edge? (23.B.09)   |     |    |     |
| 17. Are masonry walls, or sections of masonry, prohibited from falling in such quantities as to exceed the safe carrying capacities of the floors? (23.C.01) |     |    |     |
| 18. Are employees prohibited from working on the top of a wall during hazardous weather? (23.C.03)   |     |    |     |
| 19. Are floor openings within 10 feet of any wall being demolished planked solid except when employees are kept out of the area below? (23.C.05)             |     |    |     |
| 20. Is debris and other material removed from floor arches and adjacent areas before demolishing? (23.D.02)  |     |    |     |
| 21. Are safe walkways provided and used by personnel to enable them to reach any point without walking on exposed beams? (23.D.03)                           |     |    |     |
| 22. Do plank ends overlap by at least 1 foot when laid together over solid bearing? (23.D.05)  |     |    |     |
| 23. Has planks been provided for workers razing steel framing? (23.E.01)   |     |    |     |
| 24. Is steel construction dismantled column-by-column and tier-by-tier? (23.E.02)  |     |    |     |
| 25. Are structural members being dismembered prohibited from overstressed? (23.E.03)   |     |    |     |
| 26. Are all persons prohibited from being in areas affected by demolition when balling or clamming is being done? (23.F.01)                                  |     |    |     |
| 27. Is the weight of the demolition ball within 50% of the crane's rated capacity at the operating configuration? (23.F.02)                                  |     |    |     |
| 28. Is the ball attached to the load line with a swivel connection to prevent twisting and is it protected against accidental disconnection? (23.F.04)       |     |    |     |
| 29. Are all roof cornices or other ornamental stonework removed prior to pulling walls over? (23.F.06)   |     |    |     |
| 30. Remarks: (Enter actions taken for "no" answers)  |     |    |     |

**SAFETY CHECKLIST FOR DEMOLITION OPERATIONS**

|  |  |  |  |
|--|--|--|--|
| 22. (cont.) Remarks: (Enter actions taken for “no” answers)  |  |  |  |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |  |  |  |
| Contractor inspector signature   |  |  |  |
| Contractor QC/safety officer/project manager signature   |  |  |  |

# SAFETY CHECKLIST FOR FORMS, FALSEWORK, AND CONCRETE OPERATIONS

|   |            |                 |            |
|---|------------|-----------------|------------|
| Contract # and title:   |            |                 |            |
| Equipment name & number:<br>Owned or leased?  |            |                 |            |
| Contractor:   |            | Subcontractor:  |            |
| Contractor inspector:   |            | Date inspected: |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  | <b>Yes</b> | <b>No</b>       | <b>N/A</b> |
| 1. Are protective clothes and equipment (boots, gloves, goggles, etc.) utilized when pouring concrete? (05.A.01)  |            |                 |            |
| 2. Is overhead protection provided to prevent falling objects from striking workers or the public? ()   |            |                 |            |
| 3. Is a signal person provided when the point of operation is not view of the vehicle, machine, or equipment operators? (8.B.04)  |            |                 |            |
| 4. During welding or cutting operations, is protection from arc flashes, sparks, slag's, etc., provided? (10.A.04)  |            |                 |            |
| 5. Are vibrators, concrete finishers, portable electric tools properly grounded? (11.C.01(a))   |            |                 |            |
| 6. Are good housekeeping practices enforce during construction? (14.C.01)   |            |                 |            |
| 7. Are tools, materials, extension cords, hoses, and debris maintained so as not to create a tripping or other hazards? (14.C.04)   |            |                 |            |
| 8. Have all protruding nails, rods, wires been removed, hammered down, or bent over? (14.B.01)  |            |                 |            |
| 9. Is safe access to the operations provided? (16.B.04)   |            |                 |            |
| 10. Do portable ladders extend at least 3 feet above roof, platform or landing? (21.D02(b))   |            |                 |            |
| 11. Are portable ladders secured top, middle, and bottom? (21.D.08(b))  |            |                 |            |
| 12. Are transverse cleats provided where inclined ramps exceed 1-on-5 ratio? (21.F.01)  |            |                 |            |
| 13. Are employees prohibited from working above or in positions exposed to protruding reinforcement steel or other impalement hazards unless provisions have been made to control the hazard? (27.A.02)                             |            |                 |            |
| 14. Are manually guided powered and rotating concrete troweling machines equipped with a control switch that will automatically shut off the power wherever the operator removes his/her hands from the equipment handle? (27.A.02) |            |                 |            |
| 15. Is all formwork, shoring, and bracing designed, fabricated, erected, supported, braced, and maintained so that it will safely support all vertical and lateral loads? (27.B.01)   |            |                 |            |
| 16. Have the design, erection, and removal plans been submitted for review to the GDA? (27.B.02(b))   |            |                 |            |

## SAFETY CHECKLIST FOR FORMS, FALSEWORK, AND CONCRETE OPERATIONS

| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
|---|------------|-----------|------------|
| 17. Have splices been designed and constructed to prevent bucking and bending? (27.B.04)  |            |           |            |
| 18. Is sufficient bracing provided to prevent bucking or displacement? (27.B.05)  |            |           |            |
| 19. IS shoring inspected prior to, during, and immediately after placement of concrete? (27.B.06(b))  |            |           |            |
| 20. Have all nails used to secure bracing or adjustable timber single post shores been driven home and the point of the nail bent over if possible? (27.B.09(g))  |            |           |            |
| 21. Is the material used for couplings made of structural type drop-forged steel, malleable iron, or structural grade aluminum? (27.B.10(a))  |            |           |            |
| 22. Are steel rods or pipes on which the jack climb or by which the forms are lifted designed specifically for that purpose (27.B.12(a))  |            |           |            |
| 23. Are precast concrete members adequately supported? (27.C.01))   |            |           |            |
| 24. Are lifting insects which are embedded or otherwise attached to precast concrete members, other than lift-up members, capable of supporting at least four times the maximum intended load applied or transmitted to them? (27.C02(b)) |            |           |            |
| 25. Are lift-slab operations planned and designed by registered engineer or architect and are plans submitted to the DGA for review? (27.D.01)  |            |           |            |
| 26. Do threaded rods and other members that transmit loads to the jacks have a minimum safety factor of 2.5? (27.D.02(b))   |            |           |            |
| 27. Do hydraulic jacks used in lift-slab construction have a safety device which will cause the jacks to support the load in any position if the jack malfunctions) (27.D.02(e))  |            |           |            |
| 28. Is the jack blocked or cribbed when it is necessary to provide a firm foundation? (27.D.03(a))  |            |           |            |
| 29. Remarks: (Enter actions taken for "no" answers)   |            |           |            |



## SAFETY CHECKLIST FOR FORMS, FALSEWORK, AND CONCRETE OPERATIONS

| This checklist references EM 385 1-1, revised 3 November 2003  | Yes | No | N/A |
|--|-----|----|-----|
| 29. (cont.) Remarks: (Enter actions taken for “no” answers)  |     |    |     |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |     |    |     |
| Contractor inspector signature   |     |    |     |
| Contractor QC/safety officer/project manager signature   |     |    |     |

# SAFETY CHECKLIST FOR PERMIT REQUIRED CONFINED SPACES (PRCS)

|  |  |                 |           |            |
|--|--|-----------------|-----------|------------|
| Contractor # and title:  |  |                 |           |            |
| Equipment name & number:<br>owned or leased?   |  |                 |           |            |
| Contractor:  |  | Subcontractor:  |           |            |
| Contractor inspector:  |  | Date inspected: |           |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   |  | <b>Yes</b>      | <b>No</b> | <b>N/A</b> |
| 1. Has the contractor or GDA appointed in writing a competent person to evaluate the potential for permit required confined spaces? (06.I.01)  |  |                 |           |            |
| 2. Is a list of non-permit and permit required confined spaces maintained at the job site? (06.I.01)   |  |                 |           |            |
| 3. Have permit required confined spaces been identified with a sign? (06.I.01)   |  |                 |           |            |
| 4. Are permit required confined spaces reevaluated at least annually or whenever they or their characteristics change in a way that could lead to reclassification? (01.I.01)  |  |                 |           |            |
| 5. Do the entrants, attendants, supervisors, and contractors fully understand their duties? (01.I.01)  |  |                 |           |            |
| 6. Have all employees with potential entry into a PRCS been notified of the existence, location, and hazards of the space? (01.I.02)   |  |                 |           |            |
| 7. Is there a written PRCS program? (01.I.05)  |  |                 |           |            |
| 8. Has the designated authority developed and implemented a system for preparation, issuance, use, and cancellation of entry permits? (01.I.06)  |  |                 |           |            |
| 9. Have plans and procedures been developed and implemented for summoning rescue and emergency services? (01.I.06)   |  |                 |           |            |
| 10. Has the designated official developed and implemented procedures to coordinate entry operations when more than one work crew are authorized entry? (01.I.06)   |  |                 |           |            |
| 11. Have all employees been instructed not to enter PRCSs without the proper permit and without following the procedures and practices outlined in the permit? (06.I.07)   |  |                 |           |            |
| 12. Have employees required to enter PRCSs or act as an attendant or entry supervisor been trained to acquire the understanding, knowledge, and skills necessary for the safe performance of their assigned responsibilities and duties? (06.I.07) |  |                 |           |            |
| 13. Has each member of the on-site rescue team/emergency practiced making PRCS rescues at least once every 12 months? (06.I.08)  |  |                 |           |            |
| 14. Has the off-site rescue/emergency been informed of the hazards they may confront and been provided access to all permit spaces from which rescue may be necessary? (06.I.08)   |  |                 |           |            |

# SAFETY CHECKLIST FOR PERMIT REQUIRED CONFINED SPACES (PRCS)

| This checklist references EM 385 1-1, revised 3 November 2003  | Yes | No | N/A |
|--|-----|----|-----|
| 15. Are retrieval systems or methods used wherever any authorized entrant entry a PRCS, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant? (06.I.10)  |     |    |     |
| 16. Remarks: (Enter actions taken for “no” answers)  |     |    |     |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |     |    |     |
| Contractor inspector signature   |     |    |     |
| Contractor QC/safety officer/project manager signature   |     |    |     |

# SAFETY CHECKLIST FOR PERSONAL PROTECTIVE EQUIPMENT

|   |            |                 |            |
|---|------------|-----------------|------------|
| Contract # and title:   |            |                 |            |
| Equipment name & number:<br>Owned or leased?  |            |                 |            |
| Contractor:   |            | Subcontractor:  |            |
| Contractor inspector:   |            | Date inspected: |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  | <b>Yes</b> | <b>No</b>       | <b>N/A</b> |
| 1. Do employees wear clothing suitable for the weather and work conditions? The minimum for field work is a short sleeve shirt, long trousers and leather or protective work shoes or boots. (05.A.07a) |            |                 |            |
| 2. Is protective footwear worn (rubber boots, steel-toed boots, etc.)? (05.A.08)  |            |                 |            |
| 3. Do persons exposed to vehicle and equipment traffic, including signal persons or spotters wear apparel marked with reflectorized or high visibility material? (05.A.11)                              |            |                 |            |
| 4. Is overhead protection provided where the public or workers are subject to injury from falling objects? (05.A.12)  |            |                 |            |
| 5. Are protective leg chaps worn by workers who operate chain saws? Protective leg chaps must meet ASTM Standard 107 (05.A.12)  |            |                 |            |
| 6. Is eye and face protection provided when machines or operations present potential injury from physical, chemical or radiation agents? (05.B.01)  |            |                 |            |
| 7. Do persons considered to be blind in one eye wear safety spectacles with side shields on the job? (05.B.03)  |            |                 |            |
| 8. When sound-pressure level exceed 115 dB(A) steady-state is personal protection equivalent to the combination of earplug and ear muffs available? (05.C.04)   |            |                 |            |
| 9. Are noise hazard areas marked with caution signs? (16.B.04)  |            |                 |            |
| 10. Are all persons working in or visiting hard hat areas provided with and required to wear protective headgear? (05.D.01)   |            |                 |            |
| 11. Has a respiratory protection program been developed when respiratory protective equipment is required? (05.E.01)  |            |                 |            |
| 12. Is the compressor used to supply breathing air constructed and situated in a way to avoid entry of contaminated air into the supply system? (05.E.16)   |            |                 |            |
| 13. Remarks: (Enter actions taken for "no" answers)   |            |                 |            |

## SAFETY CHECKLIST FOR PERSONAL PROTECTIVE EQUIPMENT

| This checklist references EM 385 1-1, revised 3 November 2003  | Yes | No | N/A |
|--|-----|----|-----|
| 13. (cont.) Remarks: (Enter actions taken for “no” answers)  |     |    |     |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |     |    |     |
| Contractor inspector signature   |     |    |     |
| Contractor QC/safety officer/project manager signature   |     |    |     |

## SAFETY CHECKLIST FOR PORTABLE LADDERS

|  |            |                 |            |
|--|------------|-----------------|------------|
| Contract # and title:  |            |                 |            |
| Equipment name & number:<br>Owned or leased?   |            |                 |            |
| Contractor:  |            | Subcontractor:  |            |
| Contractor inspector:  |            | Date inspected: |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b>       | <b>N/A</b> |
| 1. Are all ladders of sufficient length and placed so that workers will not stretch or assume a hazardous position? (21.D.02(a))   |            |                 |            |
| 2. Do portable ladders used as temporary access extend at least 0.9 m (3ft) above the upper landing surface? (21.D.02(b))  |            |                 |            |
| 3. Are portable stepladders 20 feet or less in length? (05.A.11)   |            |                 |            |
| 4. Are portable ladders secured by top, bottom, and intermediate fastenings as required to hold them rigidly in place and to support the loads which will be imposed upon them? (21.D.08(d))           |            |                 |            |
| 5. Are metal spreader bars or locking devices provided to hold the front and back sections in an open position? (21.D.07)  |            |                 |            |
| 6. Are wood ladders free of opaque covering, except for identification or warning labels that may be placed on only face of a side rail? (27.D.06)   |            |                 |            |
| 7. Is work requiring lifting of heavy materials or substantial exertion prohibited from being performed from ladders? (21.D.09(b))   |            |                 |            |
| 8. Are double-cheated ladders used when ladders are the only means of access to or from a working area for 25 or more employees, or when ladder is to serve simultaneous two-way traffic? (21.D.09(b)) |            |                 |            |
| 9. Do portable ladders have slip-resistant feet? (21.D.09(c))  |            |                 |            |
| 10. Are workers prohibited from moving, shifting, or extending ladders while occupied? (21.D.09(d))  |            |                 |            |
| 11. Are broken or damaged ladders immediately tagged "DO NOT USE" or similar wording and removed from service until restored to a condition meeting their original design? (21.D.09(g))                |            |                 |            |
| 12. Are ladders inspected for visible defects on a daily basis and after any occurrence that could affect their serviceability? (21.D.09(f))   |            |                 |            |
| 13. Does the construction, installation and use of ladders conform to ANSI A14.1, ANSI A14.2, ANSI A14.3 and ANSI A14.4 as applicable? (21.D.01)   |            |                 |            |

# SAFETY CHECKLIST FOR PORTABLE LADDERS

| This checklist references EM 385 1-1, revised 3 November 2003  | Yes | No | N/A |
|--|-----|----|-----|
| 14. Remarks: (Enter actions taken for “no” answers)  |     |    |     |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |     |    |     |
| Contractor inspector signature   |     |    |     |
| Contractor QC/safety officer/project manager signature   |     |    |     |

# SAFETY CHECKLIST FOR PORTAL, TOWER, AND PILLAR CRANES

|   |  |                 |           |            |
|---|--|-----------------|-----------|------------|
| Contract # and Title:   |  |                 |           |            |
| Equipment name & number:<br>Owned or leased?  |  |                 |           |            |
| Contractor:   |  | Subcontractor:  |           |            |
| Contract Inspector:   |  | Date Inspected: |           |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  |  | <b>Yes</b>      | <b>No</b> | <b>N/A</b> |
| 1. Are the following available: (16.E.02)<br>a. Manufactures written erection instructions?<br>b. Listing of the weight of each component?<br>c. An activity hazard analysis for the erection?<br>d. Does the activity hazard analysis contain<br>(1) Location of crane and adjacent structures?<br>(2) Foundation design and construction requirements?<br>(3) Clearance and bracing requirements? |  |                 |           |            |
| 2. Is there a boom angle indicator within the operator's view? (16.E.04)  |  |                 |           |            |
| 3. Are luffing jib cranes equipped with: (16.E.05)<br>a. Shock absorbing jib stops?<br>b. Jib hoist limit switch?<br>c. Jib angle indicator visible to operator?  |  |                 |           |            |
| 4. If used, do rail clamps have slack between the point of attachment to the rail and the end fastened to the crane? (16E.06)   |  |                 |           |            |
| 5. Are the following with the crane at all times: (16.C.02)<br>a. The manufacturer's operating manual?<br>b. The load-rating chart?<br>c. The crane's logbook documenting use, maintenance, inspections and tests?<br>d. The operating manual for crane operational aids used on the crane?   |  |                 |           |            |
| 6. Are all crane and derrick inspections performed by a qualified person? (16.C.12)   |  |                 |           |            |
| 7. Are the following on the project site:<br>a. Completed periodic inspection report prior to initial work? (16.C.12 and Appendix H)<br>b. Pre-operational checklist used for daily inspections? (16.C.12)<br>c. Written reports of the operational performance tests? (16.C.13)<br>d. Written reports of the load performance tests? (16.C.13)   |  |                 |           |            |
| 8. Is every crane operator certified by a physician to be physically qualified to perform work? (16.C.05)   |  |                 |           |            |
| 9. Are all operators qualified by written and practical exam or by appropriate licensing agency for the type crane they are to operate? (16.C.05)   |  |                 |           |            |



# SAFETY CHECKLIST FOR PORTAL, TOWER, AND PILLAR CRANES

| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
|--|------------|-----------|------------|
| 10. Is the crane designed and constructed IAW the standards listed in Table 16-1? (16.C.05)  |            |           |            |
| 11. Is a activity hazard analysis for set-up and set-down available? (16.C.08)   |            |           |            |
| 12. Are there at least 3 wraps of cable on the drum? (16.C.10)   |            |           |            |
| 13. Are the hoisting ropes installed IAW the manufacturer's recommendations? (16.C.10)   |            |           |            |
| 14. Is the record of manufacturer's approval of any modification of equipment which affects its capacity or safe operation? (16.A.07)  |            |           |            |
| 15. Remarks: (Enter actions taken)   |            |           |            |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |            |           |            |
| Contractor inspector signature   |            |           |            |
| Contractor QC/safety officer/project manager signature   |            |           |            |

# SAFETY CHECKLIST FOR RIGGING

|  |                 |            |           |            |
|--|-----------------|------------|-----------|------------|
| Contract # and title:  |                 |            |           |            |
| Equipment name & number:<br>Owned or leased?   |                 |            |           |            |
| Contractor   | Subcontractor:  |            |           |            |
| Contractor inspector:  | Date inspected: |            |           |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   |                 | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
| 1. Is rigging equipment inspected IAW manufacturer specifications, by a competent person prior to use on each shift? (15.A.01)   |                 |            |           |            |
| 2. Has all defective rigging been removed? (15.A.01)   |                 |            |           |            |
| 3. Is rigging stored properly? (15.A.01)   |                 |            |           |            |
| 4. Are running lines within 6.5' of the ground or working level guarded by a physical barriers? (15.A.03)  |                 |            |           |            |
| 5. Are all eye splices made in an approved manner with rope thimbles? (Sling eyes excepted) (15.A.04)  |                 |            |           |            |
| 6. Are positive latching devices used to secure loads? (15.A.05)   |                 |            |           |            |
| 7. Are all custom lifting accessories marked to indicate their safe working loads? (15A.07)  |                 |            |           |            |
| 8. Are all custom designed lifting accessories proof-tested to 125% of their rated load? (15.A.07)   |                 |            |           |            |
| 9. Are the following conditions met for wire rope: (15.B.01-09)<br>a. Are they free of rust or broken wires?<br>b. Are defective ropes cut up or marked as unusable?<br>c. Do the rope clips attached with U-bolts have the U-bolts on the dead end or short end of the rope?<br>d. Are protruding ends of strands in splices on slings and bridles covered or blunted?  |                 |            |           |            |
| 10. Are the following conditions met for chain? (15.C.01-04)<br>a. Are chains inspected prior to use and weekly thereafter?<br>b. Do all coupling links or other attachments have rated capacities at least equal to that of the chain.<br>c. Are makeshift fasteners restricted from use?   |                 |            |           |            |
| 11. Are the following conditions met for fiber rope:(15.D.01-07)<br>a. Are all ropes protected from freezing, excessive heat or corrosive materials?<br>b. Are all ropes protected from abrasion?<br>c. Are splices made IAW manufacture's recommendations?<br>d. Do all eye splices in manila rope contain at least 3 full tucks and do all short splices contain at least 6 full tucks (3 on each side of the centerline of the splice)? |                 |            |           |            |

|  |  |            |           |            |
|--|--|------------|-----------|------------|
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b> |  | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
|--|--|------------|-----------|------------|

## SAFETY CHECKLIST FOR RIGGING

|   |  |  |  |
|---|--|--|--|
| 11. Are the following conditions met for fiber rope:(15.D.01-07)<br>a. Do all splices in layed synthetic fiber rope contain at least 4 full tucks and do short splices contain at least 8 full tucks ( 4 on each side of the centerline of the splice)?<br>b. Do the tails of fiber rope splices extend at least 6 rope diameters (for rope 1" diameter or greater) past the last full tuck?<br>c. Are all eye splices large enough to provide an included angle of not greater than 60* at the splice when the eye is placed over the load or support?   |  |  |  |
| 12. Are the following conditions met for all slings:(15.E.01-06)<br>d. Is protection provided between the sling and sharp surfaces?<br>e. Do all rope slings have minimum clear length of 40 times the diameter of component ropes between each end fitting or eye splice?<br>f. Do all braided slings have a minimum clear length of 40 times the diameter of component ropes between each end fitting or eye splice?<br>g. Do all welded alloy steel chain slings have affixed permanent identification stating diameter, rated load, lift capacity in vertical, choker, basket configuration, and date placed in service?<br>h. e. Is each synthetic web sling marked or coded to identify its manufacturer, rated capacities for each type hitch and the type material? |  |  |  |
| 13. Are drums, sheaves, and pulley smooth and free of surface defects that may damage rigging? (15.F.01)  |  |  |  |
| 14. Is the ratio of the diameter of the rigging and the drum, block sheave or pulley thread diameter such that the rigging will adjust without excessive wear, deformation, or damage? (15F.02)   |  |  |  |
| 15. Have all damaged drums, sheaves and pulleys been removed from service? (15.F.04)  |  |  |  |
| 16. Are all connections, fittings, fastenings, and attachments of good quality, proper size and strength, and installed IAW manufacturer's recommendations? (15.F.05)   |  |  |  |
| 17. Are all shackles and hooks sized properly? (15.F.06 & .07)  |  |  |  |
| 18. Are hoisting hooks rated at 10 tons or greater provided with safe handling means? (15.F.07)   |  |  |  |
| 19. Do all drums have sufficient rope capacity? (15.F.08)   |  |  |  |
| 20. Is the drum end of the rope anchored by a clamp securely attached to the drum in a manner approved by the manufacturer? (15.F.08)   |  |  |  |
| 21. Do grooved drums have the correct groove pitch for the diameter of the rope and is the groove depth correct? (15.F.08)  |  |  |  |
| 22. Do the flanges on grooved drums project beyond the last layer of rope at a distance of either 2" or twice the diameter of the rope, whichever is greater? (15.F.08)   |  |  |  |
| 23. Do the flanges on un-grooved drums project beyond the last layer of rope a distance of either 2.5" or twice the diameter of the rope, which ever is greater.  |  |  |  |

## SAFETY CHECKLIST FOR RIGGING

| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
|--|------------|-----------|------------|
| 24. Are the sheaves compatible with the size of rope used and as specified by the manufacture? (15F.09)  |            |           |            |
| 25. Are sheaves properly aligned, lubricated, and in good condition? (15.F.09)   |            |           |            |
| 26. When rope is subject to riding or jumping off a sheave, are sheaves equipped with cable keepers? 915.F.09)   |            |           |            |
| 27. Are eyebolts loaded in the plane of the eye and at angles less than 45* to the horizontal? (15.F.10)   |            |           |            |
| 28. Remarks: (Enter actions taken for “no” answers.)   |            |           |            |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |            |           |            |
| Contractor inspector signature   |            |           |            |
| Contractor QC/safety/project manager signature   |            |           |            |

# SAFETY CHECKLIST FOR SANITATION/HOUSEKEEPING

|  |            |                 |            |
|--|------------|-----------------|------------|
| Contract # and title:  |            |                 |            |
| Equipment name & number:<br>Owned or leased?   |            |                 |            |
| Contractor:  |            | Subcontractor:  |            |
| Contractor inspector:  |            | Date inspected: |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b>       | <b>N/A</b> |
| 1. Does the work site have an adequate supply of drinking water? Cool water shall be provided during hot weather (02.B.01)   |            |                 |            |
| 2. Are only approved potable water systems used for distribution of drinking water? (02.B.01a)   |            |                 |            |
| 3. Are potable drinking water dispensers designed, constructed, and serviced to ensure sanitary conditions; capable of being closed; and equipped with a tap; and clearly marked "DRINKING WATER"? (02.B.04)   |            |                 |            |
| 4. Is the use of a common cup prohibited? (02.B.06)  |            |                 |            |
| 5. Are outlets dispensing nonpotable water conspicuously posted with warning labels "CAUTION- WATER UNSAFE FOR DRINKING, WASHING, OR COOKING"? (02.B.07)   |            |                 |            |
| 6. Where sanitary sewers are not available have chemical, recirculation, combustion, or other toilet systems as approved by state/local government been provided? (02.C.01)                                    |            |                 |            |
| 7. Are toilet facilities constricted that the occupants are protected against weather or falling objects; all cracks sealed; and the door tight-fitting, self-closing, and capable of being latched? (02.C.03) |            |                 |            |
| 8. Are provision in place before placing toilet facilities into operation for the routine serving and cleaning of all toilets and sewage disposal (02.C.08)  |            |                 |            |
| 9. Have washing facilities been provided as needed to maintain healthful and sanitary conditions? (02.D.01)  |            |                 |            |
| 10. Whenever employees are required to shower, have the showers been provided with one shower for every 0 employees of each sex; body soap; hot and cold running water; and individual clean towels? (02.D.03) |            |                 |            |
| 11. Are all food and beverages prohibited from being consumed in toilet rooms or in an area exposed to toxic materials? (02.E.03)  |            |                 |            |
| 12. Are work areas and means of access maintained and kept safe and orderly? (14.C.01)   |            |                 |            |
| 13. Are daily inspections conducted in work area for adequate housekeeping? (14.C.01)  |            |                 |            |
| 14. Area all stairways, passageways, gangways, and accessways kept free of materials, supplies and obstructions at all times? (14.C.02)  |            |                 |            |

# SAFETY CHECKLIST FOR SANITATION/HOUSEKEEPING

| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
|--|------------|-----------|------------|
| 15. Is scrap lumber, forms and debris kept cleared from work areas and accessways in and around building storage yards and other structures? (14.C.02)   |            |           |            |
| 16. Are storage and constructions sites kept free from the accumulation of combustible materials (14.C.09)   |            |           |            |
| 17. Remarks: (Enter actions taken for “no” answers)  |            |           |            |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |            |           |            |
| Contractor inspector signature   |            |           |            |
| Contractor QC/safety officer/project manager signature   |            |           |            |

# SAFETY CHECKLIST FOR SCAFFOLDS – METAL FRAME

|  |  |                 |           |            |
|--|--|-----------------|-----------|------------|
| Contract # and title:  |  |                 |           |            |
| Equipment name & number:<br>Owned or leased?   |  |                 |           |            |
| Contractor:  |  | Subcontractor:  |           |            |
| Contractor inspector:  |  | Date inspected: |           |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   |  | <b>Yes</b>      | <b>No</b> | <b>N/A</b> |
| 1. Does the scaffolds have a standard guardrail system including toeboards (21.B)  |  |                 |           |            |
| 2. Are scaffolds and their components capable of supporting without failure at least 4 times the maximum anticipated load? (22.B.01(a))  |  |                 |           |            |
| 3. Do scaffolds and their components meet the requirements contained in ANSI A10.8? (22.B.01(a))   |  |                 |           |            |
| 4. Are scaffolds plumb and level? (22.B.03)  |  |                 |           |            |
| 5. Do scaffolds (other than suspended scaffolds) bear on base plates upon sills or other adequate foundation? (22.B.04)  |  |                 |           |            |
| 6. Is all planking overlapped or secured from movement? (22.B.06(e))   |  |                 |           |            |
| 7. Do scaffolds planks extend over their end supports not less than 6 inches (unless planking is manufactured with restraining hooks or equivalent means) nor more than 12 inches? (22.B.06) |  |                 |           |            |
| 8. Is planking supported or braced to prevent excessive spring or deflection and secured and supported to prevent loosening tipping, or displacement? (22.B.06(e))                           |  |                 |           |            |
| 9. In a built-in ladder is part of a scaffold system, does it conform to the requirements for ladders? (22.B.08(b))  |  |                 |           |            |
| 10. Has a ladder or equivalent safe access been provided? (22.B.08(a))   |  |                 |           |            |
| 11. When the scaffold height exceeds 4 times the minimum scaffold base dimension, is the scaffold secured to the wall or structure? (22.B.09)  |  |                 |           |            |
| 12. Is the use of brackets on scaffolds prohibited unless the tipping effect is controlled? (22.B.10)  |  |                 |           |            |
| 13. Are sections of metal scaffolds securely connected and all braces securely fastened? (22.C.02)   |  |                 |           |            |
| 14. Do all tube and coupler scaffolds have posts, runners, bracing of nominal 2-inch steel tubing or pipe? (22.C.04(a))  |  |                 |           |            |
| 15. Are all tube and coupler scaffolds constructed to support 4 times the maximum intended loads? (22.C.04(c))   |  |                 |           |            |
| 16. Are metal frame scaffolds properly braced by cross, horizontal, or diagonal braces (or combination of these) to secure vertical members together laterally? (22.C.05(b))                 |  |                 |           |            |

# SAFETY CHECKLIST FOR SCAFFOLDS – METAL FRAME

| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
|--|------------|-----------|------------|
| 17. Do all wheels and casters on rolling scaffolds have a positive locking device, securely fastened to the scaffold, to prevent accidental movement? (22.C.06(e))   |            |           |            |
| 18. Is the height of a free-standing mobile scaffold no more than three times the smallest base dimension? (22.C.06(e))  |            |           |            |
| 19. Remarks: (Enter actions taken for “no” answers)  |            |           |            |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |            |           |            |
| Contractor inspector signature   |            |           |            |
| Contractor QC/safety officer/project manager signature   |            |           |            |



# SAFETY CHECKLIST FOR SCRAPERS, MOTOR GRADERS, AND OTHER MOBILE EQUIPMENT

|   |            |                 |            |
|---|------------|-----------------|------------|
| Contract # and title:   |            |                 |            |
| Equipment name and number:<br>Owned or leased?  |            |                 |            |
| Contractor:   |            | Subcontractor:  |            |
| Contractor inspector:   |            | Date inspected: |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  | <b>Yes</b> | <b>No</b>       | <b>N/A</b> |
| 1. Are initial and daily/shift inspection records available? (16.A.01 & .02)  |            |                 |            |
| 2. Are only qualified operators assigned to operate equipment? (16.A.04)  |            |                 |            |
| 3. Are sufficient lights provided for night operations? (16.A.11)   |            |                 |            |
| 4. Does the unit have as a minimum a 5-B:C fire extinguisher? (16.A.26)   |            |                 |            |
| 5. Is there an effective working reverse alarm? (16.B.01)   |            |                 |            |
| 6. Is the unit shut down for refueling? (16.A.12)   |            |                 |            |
| 7. Are moving parts, shafts, sprockets, belts, etc., guarded? (16.B.03, .07 and .13)  |            |                 |            |
| 8. Is protection against hot surfaces, exhausts, etc., provided? (16.B.03 and .13)  |            |                 |            |
| 9. Are fuel tanks located in a manner to prevent spills or overflow from running onto engine exhaust or electrical equipment? (16.B.04)   |            |                 |            |
| 10. Are exhaust discharges directed so they do not endanger persons or obstruct operator vision? (16.B.05)  |            |                 |            |
| 11. Are seat belts provided for each person required to ride on the equipment? (16.B.08)  |            |                 |            |
| 12. Is protection (grills, canopies, screens) provided to shield operators from falling or flying objects? (16.B.10 and .11)  |            |                 |            |
| 13. Is roll over protection provided (ROPS)? (16.B.12)  |            |                 |            |
| 14. Is a safe means of access to the cab provided (steps, grab bars, non-slip surfaces)? (16.B.03)_   |            |                 |            |
| 15. Are adequate head and taillights provided? (16.A.07)  |            |                 |            |
| 16. Have brakes been tested and found satisfactory? (16.A.07)   |            |                 |            |
| 17. Does the unit have an emergency brake which will automatically stop the equipment upon brake failure? Is this system manually operable from the drivers position? (16.A.07)     |            |                 |            |
| 18. Is all equipment with windshields equipped with powered wipers and defogging or defrosting system? (16.A.07)  |            |                 |            |
| 19. Are all vehicles that will be parked or moving slower than normal traffic on haul roads equipped with a yellow flashing light or flasher visible from all directions? (16.A.13) |            |                 |            |
| 20. Is the slow moving emblem used on all vehicles which by design move at 25 MPH or less on public roads? (08A.04)   |            |                 |            |

# SAFETY CHECKLIST FOR SCRAPERS, MOTOR GRADERS, AND OTHER MOBILE EQUIPMENT

| This checklist references EM 385 1-1, revised 3 November 2003  | Yes | No | N/A |
|--|-----|----|-----|
| 21. Have air tanks been tested and certified? (20.A.01)  |     |    |     |
| 22. Is an air pressure gage in working condition installed on the unit? (20.A.12)  |     |    |     |
| 23. Does the air tank have an accessible drain valve? (20.B.17)  |     |    |     |
| 24. Remarks: (Enter action taken for all "no" answers)   |     |    |     |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |     |    |     |
| Contractor inspector signature   |     |    |     |
| Contractor QC/safety officer/project manager   |     |    |     |

# SAFETY CHECKLIST FOR STRUCTURAL STEEL ERECTION

|   |  |                 |           |            |
|---|--|-----------------|-----------|------------|
| Contract # and title:   |  |                 |           |            |
| Equipment name & number:<br>Owned or leased?  |  |                 |           |            |
| Contractor:   |  | Subcontractor:  |           |            |
| Contractor inspector:   |  | Date inspected: |           |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  |  | <b>Yes</b>      | <b>No</b> | <b>N/A</b> |
| 1. Prior to beginning any structural steel erection project is a Steel Erection Plan submitted to the GDA for review and acceptance? (02.B.01)  |  |                 |           |            |
| 2. Before authorizing the commencement of steel erection, dose the contractor provide the following written notifications?<br>a. Footings, piers, and mortar in the masonry piers and walls has attained either 75% of the intended minimum compressive design strength or sufficient strength to support the load imposed during steel erection.<br>b. Any repairs, replacements, and modifications to anchor bolts. (27.E.04) |  |                 |           |            |
| 3. Has each employee who might be exposed to fall hazards been trained in the safe use of access ways and fall protection systems? (27.F.11)  |  |                 |           |            |
| 4. Are adequate access roads provided into and through the site for the safe delivery and movement of cranes, trucks, other necessary equipment and materials? (27.C.05a)   |  |                 |           |            |
| 5. Are hoisting operations in steel erection pre-planned? (27.C.05c)  |  |                 |           |            |
| 6. Are floor and/or roofs opening covered and labeled "HOLE" or "COVER"? (27.E.16)  |  |                 |           |            |
| 7. Are ladders secured at the top and bottom? (21.D.16)   |  |                 |           |            |
| 8. Do ladders extend 3 feet past the leading edge of the leading edge or has a grab rail been installed? (21.D.02)  |  |                 |           |            |
| 9. Are fall protection devices (lifelines, belts and harnesses) used? Body belts are used for position only? (21.C.01)  |  |                 |           |            |
| 10. When vertical lifelines are used, is each lifeline independently attached? (21.C.09a)   |  |                 |           |            |
| 11. Are work areas and means of access maintained and kept safe and orderly? (14.C.01)  |  |                 |           |            |
| 12. Are daily inspections conducted in work area for adequate housekeeping? (14.C.01)   |  |                 |           |            |
| 13. Area all stairways, passageways, gangways, and accessways kept free of materials, supplies and obstructions at all times? (14.C.02)   |  |                 |           |            |
| 14. Are storage and constructions sites kept free from the accumulation of combustible materials (14.C.09)  |  |                 |           |            |

# SAFETY CHECKLIST FOR STRUCTURAL STEEL ERECTION

| <b>This checklist is based on EM 385-1-1, dated 3 November 2003</b>  | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
|--|------------|-----------|------------|
| 15. Remarks: (Enter actions taken for “no” answers)  |            |           |            |
| <small>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</small> |            |           |            |
| Contractor inspector signature   |            |           |            |
| Contractor QC/safety officer/project manager signature   |            |           |            |

# SAFETY CHECKLIST FOR TREE WORK, MAINTENANCE, OR REMOVAL OPERATIONS

|  |            |                 |            |
|--|------------|-----------------|------------|
| Contract # and title:  |            |                 |            |
| Equipment name & number:<br>Owned or leased?   |            |                 |            |
| Contractor:  |            | Subcontractor:  |            |
| Contractor inspector:  |            | Date inspected: |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b>       | <b>N/A</b> |
| 1. Have all employees been trained in the safe and proper use of equipment? (31.A.04(b))   |            |                 |            |
| 2. Are chain saws prohibited from being refueled while running, hot or near open flames and from being started within 10 feet of a fuel container? (13.F.04) |            |                 |            |
| 3. Has eye, ear, hand, foot, or leg protection been provided? (13.F.03)  |            |                 |            |
| 4. Are all chain saw cuts have an automatic chain brake or kickback device? (13.F.06)  |            |                 |            |
| 5. Has the area been cleared of brush, felled trees, etc. prior to cutting? (13.C.04)  |            |                 |            |
| 6. Is tree removal, trimming, or repair under the supervision of a qualified tree worker? (31.A.01)  |            |                 |            |
| 7. Are all tools carried in bag or belts – not in pockets or the top of a boot? (31.B.07)  |            |                 |            |
| 8. Are brush chippers operated and maintained in accordance with manufactures recommendations? (31.D.03(h))  |            |                 |            |
| 9. Are climber spurs of the tree climbing type? (31.B.01(a))   |            |                 |            |
| 10. Are pole pruners, pole saws, and other similar tools equipped with wood or nonmetallic handles? (31.E.01(a))   |            |                 |            |
| 11. Are all chain saws cuts made below the operators shoulder height? (13.F.06)  |            |                 |            |
| 12. Remarks: (Enter actions taken for “no” answers)  |            |                 |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>   | <b>Yes</b> | <b>No</b>       | <b>N/A</b> |
| 12. (cont.) Remarks: (Enter actions taken for “no” answers)  |            |                 |            |

# SAFETY CHECKLIST FOR TREE WORK, MAINTENANCE, OR REMOVAL OPERATIONS

|  |  |  |  |
|--|--|--|--|
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |  |  |  |
| Contractor inspector signature   |  |  |  |
| Contractor QC/safety officer/project manager signature   |  |  |  |

# SAFETY CHECKLIST FOR TRENCHING AND EXCAVATION COMPETENT PERSON

|   |  |                 |           |
|---|--|-----------------|-----------|
| Contractor # and title:   |  |                 |           |
| Equipment name & number:<br>Owned or leased?  |  |                 |           |
| Contractor:   |  | Subcontractor:  |           |
| Contractor inspector:   |  | Date inspected: |           |
| <b>Weather (circle one)    Dry    Raining    Previous Rain    Freezing    Snow/Ice</b>  |  |                 |           |
| <b>COMPETENT PERSON INFORMATION</b>   |  | <b>Yes</b>      | <b>No</b> |
| 1. Competent Persons Name: _____<br>Length of experience in this occupation: _____<br>Length of employment with this employer: _____  |  |                 |           |
| 2. Does the designated individual have training in:<br>a. Soil Analysis?<br>b. Use of protective equipment and systems?<br>c. Meet the requirements of 29 CFR 1926.650, 651 & 652?  |  |                 |           |
| 3. Does the designated individual have knowledge of:<br>a. Soil analysis? (describe types of soils and properties)<br>b. Use of protective systems? (What method is being used and how was it determined)<br>c. Requirements of 29 CFR 1926.650, 651 & 652? |  |                 |           |
| 4. Does the designated person have authority to:<br>a. Take prompt corrective action to eliminate existing and predictable Hazards?<br>b. Stop work in dangerous situations?  |  |                 |           |
| <b>GENERAL</b>  |  |                 |           |
| 5. When was the last inspection of the excavation conducted?  |  |                 |           |
| 6. Was an inspection accomplished and documented prior to the start of work?  |  |                 |           |
| 7. Where inspections accomplished and documented as needed throughout the work shift?   |  |                 |           |
| 8. Where inspections accomplished and documented after rains or other hazardous conditions increased?   |  |                 |           |
| 9. Is the excavations 5 feet or greater?  |  |                 |           |
| <b>WATER CONDITIONS</b>   |  |                 |           |
| 10. Is dewatering equipment being used on the site?   |  |                 |           |
| 11. If yes is the competent person monitoring the equipment and its proper operation?   |  |                 |           |
| 12. Has the excavation been subject to water accumulation?  |  |                 |           |
| 13. Has the soil in the trench adversely affected?  |  |                 |           |
| 14. If yes has the competent person inspected the excavation and taken action?  |  |                 |           |

# SAFETY CHECKLIST FOR TRENCHING AND EXCAVATION COMPETENT PERSON

|   |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
|---|------|--|--|--|--|----------------------|------|--|--|--|------|--|--|--------------------------------|------|
| <b>EGRESS</b>   |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| 15. Is a means of egress provided every 25 feet?  |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| 16. Is a ramp used for access or egress to the excavation? (If no, skip to the next section)  |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| 17. Is the ramp used solely for employee access?  |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| 18. If yes is it designed by the competent person for safe egress and access?   |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| 19. Does the ramp meet specifications?  |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| <b>CONFINED SPACES</b>  |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| 20. Is there a potential for a hazardous atmosphere in the trench? If not, why?   |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| 21. Is air monitoring equipment on site?  |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| 22. Has a qualified person been assigned to assess the confined space?  |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| 23. Is emergency rescue equipment as outline in 29 CFR 1926.651(g)(2)(I) readily accessible to employees?   |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| <table style="width: 100%; border: none;"> <tr> <td style="width: 60%; border-bottom: 1px solid black; height: 30px;"></td> <td style="width: 40%; border-bottom: 1px solid black; height: 30px;"></td> </tr> <tr> <td>Government Inspector</td> <td style="text-align: center;">Date</td> </tr> <tr> <td style="border-bottom: 1px solid black; height: 30px;"></td> <td style="border-bottom: 1px solid black; height: 30px;"></td> </tr> <tr> <td>Signature of Competent Person (contractor)</td> <td style="text-align: center;">Date</td> </tr> <tr> <td style="border-bottom: 1px solid black; height: 30px;"></td> <td style="border-bottom: 1px solid black; height: 30px;"></td> </tr> <tr> <td>Print Name of Competent Person</td> <td style="text-align: center;">Date</td> </tr> </table> |      |  |  |  |  | Government Inspector | Date |  |  | Signature of Competent Person (contractor) | Date |  |  | Print Name of Competent Person | Date |
|   |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| Government Inspector  | Date |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
|   |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| Signature of Competent Person (contractor)  | Date |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
|   |      |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |
| Print Name of Competent Person  | Date |  |  |  |  |                      |      |  |  |  |      |  |  |                                |      |



# SAFETY CHECKLIST FOR TRENCHING AND EXCAVATION OPERATIONS

|   |  |                 |           |            |
|---|--|-----------------|-----------|------------|
| Contractor # and title:   |  |                 |           |            |
| Equipment name & number:<br>Owned or leased?  |  |                 |           |            |
| Contractor:   |  | Subcontractor:  |           |            |
| Contractor inspector:   |  | Date inspected: |           |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  |  | <b>Yes</b>      | <b>No</b> | <b>N/A</b> |
| 1. Have underground utilities (e.g. sewer, gas, communication, water, fuel) been located prior to excavation? (25.A.01a)  |  |                 |           |            |
| 2. In areas where there are known or suspected unexploded ordinance, has the area been cleared by qualified explosive ordinance (EOD) Personnel? (25.A.01b)     |  |                 |           |            |
| 3. When required does the contractor obtain a digging permit from Base Civil Engineers or appropriate authority prior to initiation excavation work? (25.A.01b) |  |                 |           |            |
| 4. Are excavations, the adjacent areas, and protective systems inspected daily (25.A.02a)   |  |                 |           |            |
| 5. When excavations are over 5 feet in depth or greater protected by benching, layback or shoring? (25.A.03)  |  |                 |           |            |
| 6. When excavations are undercut, is the overhanging material safely supported? (25.A.05)   |  |                 |           |            |
| 7. Have methods been to control the accumulation of water in excavations? (25.A.06)   |  |                 |           |            |
| 8. Are employees protected from falling material (loose rocks or soil)? (25.A.07)   |  |                 |           |            |
| 9. Are substantial stop logs or barricades installed where vehicles or equipment are used or allowed adjacent to an excavation? (25.A.08a)                      |  |                 |           |            |
| 10. Are all wells, calyx holes, pits, shafts, etc barricaded or covered? (25.B.02)  |  |                 |           |            |
| 11. Are walkways provided where employees or equipment are required or permitted to cross over excavations? (25.B.04)   |  |                 |           |            |
| 12. Where employees are required to enter excavations is access/egress provided every 25 feet laterally? (25.B.05)  |  |                 |           |            |
| 13. Are support systems drawn from manufacture's tabulated data in accordance with all manufactures specifications? (25.D.01a)                                  |  |                 |           |            |
| 14. Are copies of the tabulated data maintained at the job site? (25.D.01b)   |  |                 |           |            |
| 15. Are members of support systems securely connected together? (25.D.03a)  |  |                 |           |            |
| 16. Are shields installed in a manner to restrict lateral or other hazardous movement? (25.D.04b)   |  |                 |           |            |

## SAFETY CHECKLIST FOR TRENCHING AND EXCAVATION OPERATIONS

| This checklist references EM 385 1-1, revised 3 November 2003  | Yes | No | N/A |
|--|-----|----|-----|
| 17. Remarks: (Enter actions taken for “no” answers)  |     |    |     |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |     |    |     |
| Contractor inspector signature   |     |    |     |
| Contractor QC/safety officer/project manager signature   |     |    |     |

# SAFETY CHECKLIST FOR CRANE INSPECTIONS

|   |            |                 |            |
|---|------------|-----------------|------------|
| Contract # and title:   |            |                 |            |
| Equipment name and number:<br>Owned or leased?  |            |                 |            |
| Contractor:   |            | Subcontractor:  |            |
| Contractor inspector:   |            | Date inspected: |            |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  | <b>Yes</b> | <b>No</b>       | <b>N/A</b> |
| 1. Are inspection of cranes and derricks conducted in accordance with applicable ANSI/ASME standards, OSHA regulations, and manufactures specifications? (16.C.12(a))   |            |                 |            |
| 2. Are inspections performed by a qualified person? (16.C.12(b))  |            |                 |            |
| 3. Did the contractor notify the GDA at least 24 hours prior to any inspection/test so that the GDA may be available to observe the inspection/test? (16.C.12(c))   |            |                 |            |
| 4. Initial Test - Prior to initial use, are all new and altered cranes inspected by a qualified person to ensure compliance with all applicable standards? (16.C.12(c)(1))  |            |                 |            |
| 5. Functional Test Inspection – At the beginning of every operation (at the beginning of each shift), does the operator or designated person conduct a (pre-operational) inspection? (16.C.12(c)(2))                                      |            |                 |            |
| 6. If a checklist is used for pre-operational inspections, is a copy maintained at the project site? (16.C.12(c)(2)(a))   |            |                 |            |
| 7. If a checklist is not used for pre-operational inspections, is the operator's log? (16.C.12(c)(2)(b))  |            |                 |            |
| 8. Frequent Inspections – Are frequent inspections (visual and audible examination of the crane) conducted?<br>a. Normal service – Monthly<br>b. Heavy service – Weekly to monthly<br>c. Severe service – Daily to weekly (16.C.12(c)(3)) |            |                 |            |
| 9. Periodic Inspections - Are periodic inspections (visual and audible examination of the crane) conducted?<br>a. Normal service – Yearly<br>b. Heavy service – Yearly<br>c. Severe service – Quarterly (16.C.12(c)(3))                   |            |                 |            |
| 10. Are infrequent services cranes that have been idle for a period one month or more, but less than one year inspected in accordance with 16.C.12(c)(3)? (16.C.12(5)(a))   |            |                 |            |
| 11. Are infrequent services cranes that have been idle for a period one year or more inspected in accordance with 16.C.12(c)(3)? (16.C.12(5)(b))  |            |                 |            |

## SAFETY CHECKLIST FOR CRANE INSPECTIONS

| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  | <b>Yes</b> | <b>No</b> | <b>N/A</b> |
|---|------------|-----------|------------|
| 12. Are infrequent services cranes, exposed to adverse environmental conditions, inspected more frequently as determined by the GDA or the Contractor with the concurrence of GDA? (16.C.12(5)(b))  |            |           |            |
| 13. When required, is an operational performance test conducted?<br>a. Before initial use of a crane in which a load bearing (excluding the rope) or load controlling part or component, brake, travel component, or clutch have been altered, replaced, or repaired.<br>b. Ever time a crane is reconfigured or reassembly to include booms.<br>c. Ever time a crane is brought onto a USACE project; and<br>d. Ever year. (16.C.13(c)(1)) |            |           |            |
| 14. When required, is a load performance test conducted?<br>a. Before initial use of a crane in which a load bearing (excluding the rope) or load controlling part or component, brake, travel component, or clutch have been altered, replaced, or repaired.<br>b. Every time a crane is reconfigured or reassembled after disassembly to include boom; and<br>c. Every 4 years. (16.C.13(c)(2))   |            |           |            |
| 15. Is the test load not less than 110 percent of the anticipated load and not greater than 100 percent of the manufacturer's load rating capacity chart at the configuration of the test?  |            |           |            |
| 16. Is a written report of the performance test showing the test procedures and confirming the adequacy of repairs or alterations, maintained with the crane or at the on-site project office?  |            |           |            |
| 17. Remarks: (Enter action taken for all "no" answers)  |            |           |            |
| <small>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</small>  |            |           |            |
| Contractor inspector signature  |            |           |            |
| Contractor QC/safety officer/project manager  |            |           |            |

# SAFETY CHECKLIST FOR MATERIAL HOISTS

|   |  |                 |           |
|---|--|-----------------|-----------|
| Contract # and title:   |  |                 |           |
| Equipment name & number:  |  |                 |           |
| Contractor:   |  | Subcontractor:  |           |
| Contract Inspector:   |  | Date inspected: |           |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  |  | <b>Yes</b>      | <b>No</b> |
| <b>N/A</b>  |  |                 |           |
| 1. Prior to initial use on any USACE project, and at least monthly thereafter, is a periodic inspection conducted by a qualified person? (16.K.05) <ul style="list-style-type: none"> <li>a. Are periodic inspections conducted IAW manufacturer's specification?</li> <li>b. At a minimum are sheaves, racks, pinions, guy ties, connections, miscellaneous clamps, braces, and similar parts?</li> <li>c. Is the GDA notified at least 24 hours prior to any inspections?</li> <li>d. Are pre-operational inspections conducted prior to every operation (shift) of the hoist?</li> </ul> |  |                 |           |
| 2. Are all hoist towers, masts, guys or braces, counterweights, drive machinery supports, sheave supports, platforms, supporting structures, and accessories designed by a licensed engineer? (16.K.02)   |  |                 |           |
| 3. Is a copy of the hoist-operating manual available? (16.K.04)   |  |                 |           |
| 4. Do all floors and platforms have slip-resistant surfaces? (16.K.08)  |  |                 |           |
| 5. Are landings and runways adequately barricaded and is overhead protection provided where needed? (16.K.08)   |  |                 |           |
| 6. Are hoisting ropes installed IAW manufacturer's instructions? (16.K.10) <ul style="list-style-type: none"> <li>a. Are there at least three (3) full wraps of cable on the drums of the hoist at all times?</li> <li>b. Does the rope or crane manufacturer specify the drum end of the rope anchored to the drum by an arrangement?</li> <li>c. Are personnel prohibited from riding on material hoists or other hoisting equipment?</li> </ul>  |  |                 |           |
| 7. Are operating rules posted at the hoist operator's station? (16.K.14)  |  |                 |           |
| 8. Are air-powered hoists connected to an air supply of sufficient capacity and pressure to safely operate the hoist? (16.K.15)   |  |                 |           |
| 9. Are pneumatic hoses secured by some positive means to prevent accidental disconnection? (16.K.15)  |  |                 |           |

## SAFETY CHECKLIST FOR MATERIAL HOISTS

| This checklist references EM 385 1-1, revised 3 November 2003  | Yes | No | N/A |
|--|-----|----|-----|
| 10. Remarks: (Enter actions taken for all “no” answers.)   |     |    |     |
| <p>This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard.</p> |     |    |     |
| Contractor inspector signature   |     |    |     |
| Contractor QC/safety officer/project manager signature   |     |    |     |

# SAFETY CHECKLIST FOR EARTH DRILLING EQUIPMENT

|   |  |                 |           |
|---|--|-----------------|-----------|
| Contract # and title:   |  |                 |           |
| Equipment name & number:  |  |                 |           |
| Contractor:   |  | Subcontractor:  |           |
| Contractor inspector:   |  | Date inspected: |           |
| <b>This checklist references EM 385 1-1, revised 3 November 2003</b>  |  | <b>Yes</b>      | <b>No</b> |
| 1. Is a copy of the manual for all drilling equipment available? (16.M.02)  |  |                 |           |
| 2. Have all overhead electrical hazards and potential ground hazards been identified in a site layout plan and addressed in an activity hazard analysis? (16.M.02)  |  |                 |           |
| 3. Are MSDSs for all drilling fluids available? (16.M.05)   |  |                 |           |
| 4. Does the drilling equipment have 2 easily accessible emergency shut down devices (one for the operator and one for the helper)? (16.M.06)  |  |                 |           |
| 5. Is the equipment posted with a warning of electrical hazards? (16.M.07)  |  |                 |           |
| 6. Is there a spotter or an electrical proximity-warning device available to ensure safe distances from power lines are maintained? (16.M.07)   |  |                 |           |
| 7. Remarks: (Enter actions taken for “no” answers)  |  |                 |           |
| This checklist is a work simplification tool. It is not intended to replace safety and health standards, manufactures operating/maintenance manuals or national conscious standards. For current information consult the appropriate directive, manual or standard. |  |                 |           |
| Contractor inspector signature  |  |                 |           |
| Contractor QC/safety officer/project manager  |  |                 |           |





## INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.
3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.
4. Submittals requiring expeditious handling will be submitted on a separate form.
5. Separate transmittal form will be used for submittals under separate sections of the specifications.
6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".
7. Form is self-transmittal, letter of transmittal is not required.
8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.
9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

### THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

- |   |   |
|---|---|
| A -- Approved as submitted.   | E -- Disapproved (See attached).  |
| B -- Approved, except as noted on drawings.   | F -- Receipt acknowledged.  |
| C -- Approved, except as noted on drawings.<br>Refer to attached sheet resubmission required. | FX -- Receipt acknowledged, does not comply<br>as noted with contract requirements. |
| D -- Will be returned by separate correspondence.   | G -- Other ( <i>Specify</i> )   |

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

*(Reverse of ENG Form 4025-R)*



Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352  
(See reverse for public burden disclosure.)

Approved by  
OM  
0348-0046

[illegible]

## INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.  
  
(b) Enter the full names of the individuals(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.

Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

**DISCLOSURE OF LOBBYING ACTIVITIES  
CONTINUATION SHEET**

Approved by  
OM  
0348-0046

Reporting Entity: \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_

# REAL PROPERTY INVENTORY

| ITEM                   | TALLY  | TOTAL |
|------------------------|--|-------|
| COMMODOES              |  |       |
| LAVATORIES             |  |       |
| URINALS                |  |       |
| EXHAUST FAN (9")       |  |       |
| EXHAUST FAN<br>(OTHER) |  |       |
| WATER COOLER           |  |       |
| HOTWATER HEATER        |  |       |
| MOP SINK               |  |       |
| AC PLANT               | LS 5 TN.                      5-25 TN.                      25-100 TN.                      OVER 100 TN. |       |
| AS (WINDOW TYPE)       |  |       |
| FIRE ALARM SYSTEM      | MANUAL                      HALON                      SPRINKLER   |       |
| EMERGENCY LIGHTS       |  |       |
| UNIT HEATER            |  |       |
| STRIP HEATER           |  |       |
| COOLING TOWER          |  |       |
| WALK-IN COOLER         |  |       |
| AIR CURTAIN            |  |       |
| EYE WASH               |  |       |
| SHOWERS                |  |       |
| BOILER                 | GAS FIRED                      OIL FIRED                      STEAM                                      |       |
| FUEL TANK              | UNDERGROUND                      OUTSIDE   |       |

## REAL PROPERTY INVENTORY

| ITEM           | TALLY | TOTAL |
|----------------|-------|-------|
| WASH BASIN     |       |       |
| AIR COMPRESSOR |       |       |
| HOISTS         |       |       |
|                |       |       |
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|                |       |       |
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| INVENTORY BY:  |       | DATA: |
| RECONCILED BY: |       | DATA: |

# REAL PROPERTY INVENTORY

| ITEM            | TALLY | TOTAL |
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|                 |       |       |
|                 |       |       |
| INVENTORIED BY: |       | DATE: |
| RECONCILED BY:  |       | DATE: |



**FORT STEWART & HUNTER ARMY AIRFIELD**  
**BORROW PIT EXCAVATION PERMIT**

\*Date of Application:

\*Applicant (user/unit):

\*Borrow Pit Location (Pit #): Ft. Stewart/HAAF training area,

\*Cubic Yards required:

\*Type of Material:

\*Final Destination:

\*Date to Begin:

\*Date to End:

\*POC (On-site Manager):

\*POC Phone Number:

---

*Below line for office use only.*

---

***On-Site Manager/Operator – mobile number***

---

***Government Contracting Officer Representative***

---

***Approved for Borrow Pit Number***

---

***Borrow Pit Management - Environmental***

*(912-767-9443/fax-767-9779, George Harris or Anthony Austermann)*

***\*Please retain a copy of this Permit, on site, with the operator and notify Range Control when entering or leaving the training area.***

---

**Borrow Pit Release/Checkout is required before leaving the borrow pit area.**

---

**Release Approved by/date**

## **Surface Mining (Borrow Pit) Standard Operating Procedure**

### **Excavation Procedure:**

1. The Operator of the borrow pit will maintain or create a rim ditch to maximize accessibility to borrow pit materials and ultimately to optimize excavation of that material.
2. The Operator will utilize a water pump, where and when appropriate allowing him access to fill materials in a manner consistent with proper surfacing mining procedures.
3. The Operator shall show a plan as to how the property will be mined, the limits of the affected acreage, the natural drainage features and water disposal, the initial mining and overburden (spoil) area(s), the erosion and sedimentation controls, the ingress/egress area(s), the direction and schedule of mining advancement, the area to be left undisturbed (buffer) where necessary, and a plan that shows projected final reclamation of the site.
4. All borrow pit design and excavation actions shall support the objective of the borrow pit eventually becoming a recreational fishpond, if soil conditions, location and ground water resources favor such development. To accomplish this objective the following procedures must be employed.
  - a. Average depth, when abandoned, will be 6 feet minimum and 12 feet maximum (water depth will range from 3-8 feet).
  - b. Borrow pits will be excavated in a manner, *from the beginning*, to ultimately move them to a useable recreational fishpond.

**\*The pit operator shall be responsible for maintaining a 4:1 slope on all pit walls/edges and marking these slopes/edges in a manner as to prevent any foot or vehicle traffic from inadvertently falling into the pit.**

### **Erosion & Sedimentation Control Measures:**

- Remain within the boundaries of the borrow pit, which are marked by "surrounding trees and the perimeter road", while making every effort to retain and/or create a buffer zone(s) of undisturbed/natural vegetation following all guideline within *Georgia's Best Management Practices* to prevent silts and sediments from leaving the borrow pit area and entering the waters of the State of Georgia.

### **Water Quality Control Measures:**

- Borrow pit excavation shall not be conducted within 100 feet of the banks of any waters of the State of Georgia, nor discharges to the water or ground to ensure no adverse affects on these waters.  
- No Point Source discharges shall be allowed without coordination with the Environmental Branch, and BMPs will be followed at all times.

### **Sensitive/Special Sites Measures:**

- If historical or archaeological resources are encountered during excavation of this borrow pit. Stop working until the Environmental Branch has cleared the pit. ***Immediately contact the Cultural Resources Office - 767-3359/2010***

- No borrow pit may be expanded that is in the proximity of a protected cultural resource site or within the cantonment area.

***\*Where applicable, adverse effects from audible elements (blasting), and visual elements are to be avoided near these sites so as not to diminish the integrity of the location, design, setting, materials, workmanship, or other structural details.***

### **Fish and Wildlife Measures:**

- Borrow pits or portions of the pits that are no longer suitable for further excavation for fill may be moved toward a final excavation phase that will produce a manageable fish pond.

- The following construction criteria shall strive to be incorporated during excavation for this purpose:

1. A water depth of 3 to 8 feet
2. An area of 3 to 10 acres
3. *All edges sloped at 4:1, with a 5:1 entrance/exit point for gopher tortoise escape, to be converted to a boat ramp upon pond completion.*
4. Earthen piers may be left within the excavated pond
5. Soil and erosion controls to stabilize slope and pond margins with appropriate ground cover plants
6. Borrow pit/pond shall be free of hazards including pilings, poles, abandoned equipment, etc.

Endangered/Protected Species Measures:

- If the borrow pit you are proposing to use is near a protected species, another borrow pit of the same type of material which is near your final destination will be assigned for your use.
- If threatened or endangered species are encountered during excavation of this borrow pit, all work is to be discontinued, and *immediately contact the **Fish & Wildlife Office at 767-7263/2584.***

Wetlands Measures:

- Maintain a minimum distance of 50 feet from borrow pit banks to wetlands delineation (footprints).

Solid/Hazardous Waste Measures:

- All solid and hazardous wastes shall be disposed of properly.
- No debris will be left at, in, or around the borrow pit.

Air Quality Measures:

- Where applicable, adverse effects from atmospheric elements, specifically fugitive dust, are to be prevented so as to avoid any significant deterioration of the air quality.

**\* If the borrow pit you are proposing to use has been moved into this final excavation phase or has already been converted into a fishpond, another borrow pit of the same type of material which is near your final destination will be assigned for your use. Also, seasonal conditions may be such as to merit utilization of another site to offset unsafe conditions. These sites will require coordination with your POC for utilization. If necessary, another borrow pit of the same material type that is near your final destination will be assigned for your use.**

***\* The following pass must be obtained from the Range Control Office **before entering** any Training Area.***

| <b><i>POV PASS FOR FORT STEWART ROADS AND TRAINING AREAS</i></b>   |                           |                        |
|--|---------------------------|------------------------|
| TO: Appropriate Range Guards and/or military police  |                           |                        |
| FROM: Chief Range Division, Fort Stewart Ga. 31314 (912) 767-877/8100  |                           |                        |
| The following individual(s) is/are authorized access to the following Training Area/Facilities beginning _____<br>thru _____<br>(Start Date) (End Date)  |                           |                        |
| Rank, Name (Last, First)   | Training Area(s) Facility |                        |
| Organization   | Phone Number              |                        |
| Reason for Access Pass   |                           |                        |
| Vehicle (Model)<br>(State)   | Year                      | (License Plate Number) |
| <p align="center"><u>Statement of understanding</u></p> <p>I understand that I am permitted to use only the above listed training area(s) and roads leading to and from that area. I may only use that area/facility for the date and time listed below. I understand that I am using these roads at my own risk, and the Commander, 3<sup>rd</sup> infantry Division and Fort Stewart Assume no responsibility for my safety.</p> <p>Permanently off limit areas- High Risk Dud Area: Artillery Impact Area, Aerial Gunnery Ranges 1-3 (AGR), EOD Area, Tank Gunnery Ranges (B9-16) and small arms impact area, Luzon Range. Abandoned Ranges located in C1 and C4 training areas.</p> <p>CAUTION: DO NOT DISTURB UNEXPLODED AMMUNITION! Mark location and notify Range Control (912) 767-8777 or call the Military Police at 911.</p> <p>I have been briefed and understand the OFF-LIMITS areas and the limitations of this pass. I will notify Range Control at 767-8777 prior to entering an area and upon departure.</p> |                           |                        |
| Chief, Range Division  | Bearer's Signature        |                        |
| <b><i>POST ON DASHBOARD OF VEHICLE</i></b>   |                           |                        |



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## SECTION 01312A

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08/04

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  - 1.1.2 Other Factors
- 1.2 QCS SOFTWARE
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## SECTION 01312A

## QUALITY CONTROL SYSTEM (QCS)

08/04

## PART 1 GENERAL

## 1.1 General

The Government will use the Resident Management System for Windows (RMS) to assist in its monitoring and administration of this contract. The Contractor shall use the Government-furnished Construction Contractor Module of RMS, referred to as QCS, to record, maintain, and submit various information throughout the contract period. The Contractor module, user manuals, updates, and training information can be downloaded from the RMS web site. This joint Government-Contractor use of RMS and QCS will facilitate electronic exchange of information and overall management of the contract. QCS provides the means for the Contractor to input, track, and electronically share information with the Government in the following areas:

- Administration
- Finances
- Quality Control
- Submittal Monitoring
- Scheduling
- Import/Export of Data

## 1.1.1 Correspondence and Electronic Communications

For ease and speed of communications, both Government and Contractor will, to the maximum extent feasible, exchange correspondence and other documents in electronic format. Correspondence, pay requests and other documents comprising the official contract record shall also be provided in paper format, with signatures and dates where necessary. Paper documents will govern, in the event of discrepancy with the electronic version.

## 1.1.2 Other Factors

Particular attention is directed to Contract Clause, "Schedules for Construction Contracts", Contract Clause, "Payments", Section 01320A, PROJECT SCHEDULE, Section 01330, SUBMITTAL PROCEDURES, and Section 01451A, CONTRACTOR QUALITY CONTROL, which have a direct relationship to the reporting to be accomplished through QCS. Also, there is no separate payment for establishing and maintaining the QCS database; all costs associated therewith shall be included in the contract pricing for the work.

## 1.2 QCS SOFTWARE

QCS is a Windows-based program that can be run on a stand-alone personal computer or on a network. The Government will make available the QCS software to the Contractor after award of the construction contract. Prior to the Pre-Construction Conference, the Contractor shall be responsible to download, install and use the latest version of the QCS software from the Government's RMS Internet Website. Upon specific justification and request by the Contractor, the Government can provide QCS on 3-1/2 inch high-density diskettes or CD-ROM. Any program updates of QCS will be made



available to the Contractor via the Government RMS Website as they become available.

### 1.3 SYSTEM REQUIREMENTS

The following is the minimum system configuration that the Contractor shall have to run QCS:

#### RMS Server

##### **Hardware**

IBM-compatible PC with 1000 MHz Pentium or higher processor

1000+ MB RAM

1 GB free disk space

3 1/2 inch high-density floppy drive

Compact Disk (CD) Reader 8x speed or higher

TCP/IP Network/Internet Connection

##### **Software**

Windows 2000 or higher

Oracle 8i Server

Virus protection software that is regularly upgraded with all issued manufacturer's updates

##### **Personnel**

Oracle Database Administrator (DBA)

#### RMS Workstation

##### **Hardware**

IBM-compatible PC with 1000 MHz Pentium or higher processor

256+ MB RAM for workstation

500 MB free disk space

3 1/2 inch high-density floppy drive

Compact Disk (CD) Reader 8x speed or higher

SVGA or higher resolution monitor (1024x768, 256 colors)

Mouse or other pointing device

Windows compatible printer. (Laser printer must have 4 MB+ of RAM)

TCP/IP Network/Internet Connection

**Software**

MS Windows 2000 or higher

Oracle 8i Client

Word Processing software: MS Word 2000 or newer

Latest version of: Netscape Navigator, Microsoft Internet Explorer, or other browser that supports HTML 4.0 or higher

Electronic mail (E-mail) MAPI compatible

Virus protection software that is regularly upgraded with all issued manufacturer's updates

**QCS and QAS System****Hardware**

IBM-compatible PC with 1000 MHz Pentium or higher processor

256+ MB RAM for workstation / 512+ MB RAM for server

1 GB hard drive disk space for sole use by the QCS system

3 1/2 inch high-density floppy drive

Compact Disk (CD) Reader 8x speed or higher

SVGA or higher resolution monitor (1024x768, 256 colors)

Mouse or other pointing device

Windows compatible printer. (Laser printer must have 4 MB+ of RAM)

Connection to the Internet, minimum 56k BPS

**Software**

MS Windows 2000 or higher

QAS-Word Processing software: MS Word 2000 or newer

Latest version of: Netscape Navigator, Microsoft Internet Explorer, or other browser that supports HTML 4.0 or higher

Electronic mail (E-mail) MAPI compatible

Virus protection software that is regularly upgraded with all issued manufacturer's updates

**1.4 RELATED INFORMATION****1.4.1 QCS User Guide**

After contract award, the Contractor shall download instructions for the

installation and use of QCS from the Government RMS Internet Website; the Contractor can obtain the current address from the Government. In case of justifiable difficulties, the Government will provide the Contractor with a CD-ROM containing these instructions.

#### 1.4.2 Contractor Quality Control (CQC) Training

The use of QCS will be discussed with the Contractor's QC System Manager during the mandatory CQC Training class.

### 1.5 CONTRACT DATABASE

Prior to the pre-construction conference, the Government shall provide the Contractor with basic contract award data to use for QCS. The Government will provide data updates to the Contractor as needed, generally by files attached to E-mail. These updates will generally consist of submittal reviews, correspondence status, QA comments, and other administrative and QA data.

### 1.6 DATABASE MAINTENANCE

The Contractor shall establish, maintain, and update data for the contract in the QCS database throughout the duration of the contract. The Contractor shall establish and maintain the QCS database at the Contractor's site office. Data updates to the Government shall be submitted by E-mail with file attachments, e.g., daily reports, schedule updates, payment requests. If permitted by the Contracting Officer, a data diskette or CD-ROM may be used instead of E-mail (see Paragraph DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM). The QCS database typically shall include current data on the following items:

#### 1.6.1 Administration

##### 1.6.1.1 Contractor Information

The database shall contain the Contractor's name, address, telephone numbers, management staff, and other required items. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver Contractor administrative data in electronic format via E-mail.

##### 1.6.1.2 Subcontractor Information

The database shall contain the name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor must be listed separately for each trade to be performed. Each subcontractor/trade shall be assigned a unique Responsibility Code, provided in QCS. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver subcontractor administrative data in electronic format via E-mail.

##### 1.6.1.3 Correspondence

All Contractor correspondence to the Government shall be identified with a serial number. Correspondence initiated by the Contractor's site office shall be prefixed with "S". Letters initiated by the Contractor's home (main) office shall be prefixed with "H". Letters shall be numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C".

#### 1.6.1.4 Equipment

The Contractor's QCS database shall contain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

#### 1.6.1.5 Management Reporting

QCS includes a number of reports that Contractor management can use to track the status of the project. The value of these reports is reflective of the quality of the data input, and is maintained in the various sections of QCS. Among these reports are: Progress Payment Request worksheet, QA/QC comments, Submittal Register Status, Three-Phase Inspection checklists.

#### 1.6.2 Finances

##### 1.6.2.1 Pay Activity Data

The QCS database shall include a list of pay activities that the Contractor shall develop in conjunction with the construction schedule. The sum of all pay activities shall be equal to the total contract amount, including modifications. Pay activities shall be grouped by Contract Line Item Number (CLIN), and the sum of the activities shall equal the amount of each CLIN. The total of all CLINs equals the Contract Amount.

##### 1.6.2.2 Payment Requests

All progress payment requests shall be prepared using QCS. The Contractor shall complete the payment request worksheet and include it with the payment request. The work completed under the contract, measured as percent or as specific quantities, shall be updated at least monthly. After the update, the Contractor shall generate a payment request report using QCS. The Contractor shall submit the payment requests with supporting data by E-mail with file attachment(s). If permitted by the Contracting Officer, a data diskette may be used instead of E-mail. A signed paper copy of the approved payment request is also required, which shall govern in the event of discrepancy with the electronic version.

#### 1.6.3 Quality Control (QC)

QCS provides a means to track implementation of the 3-phase QC Control System, prepare daily reports, identify and track deficiencies, document progress of work, and support other contractor QC requirements. The Contractor shall maintain this data on a daily basis. Entered data will automatically output to the QCS generated daily report. The Contractor shall provide the Government a Contractor Quality Control (CQC) Plan within the time required in Section 01451A, CONTRACTOR QUALITY CONTROL. Within seven calendar days of Government acceptance, the Contractor shall submit a data diskette or CD-ROM reflecting the information contained in the accepted CQC Plan: schedule, pay activities, features of work, submittal register, QC requirements, and equipment list.

##### 1.6.3.1 Daily Contractor Quality Control (CQC) Reports.

QCS includes the means to produce the Daily CQC Report. The Contractor may use other formats to record basic QC data. However, the Daily CQC Report generated by QCS shall be the Contractor's official report. Data from any supplemental reports by the Contractor shall be summarized and consolidated onto the QCS-generated Daily CQC Report. Daily CQC Reports shall be

submitted as required by Section 01451A, CONTRACTOR QUALITY CONTROL. Reports shall be submitted electronically to the Government using E-mail or diskette within 24 hours after the date covered by the report. Use of either mode of submittal shall be coordinated with the Government representative. The Contractor shall also provide the Government a signed, printed copy of the daily CQC report.

#### 1.6.3.2 Deficiency Tracking.

The Contractor shall use QCS to track deficiencies. Deficiencies identified by the Contractor will be numerically tracked using QC punch list items. The Contractor shall maintain a current log of its QC punch list items in the QCS database. The Government will log the deficiencies it has identified using its QA punch list items. The Government's QA punch list items will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of both QC and QA punch list items.

#### 1.6.3.3 Three-Phase Control Meetings

The Contractor shall maintain scheduled and actual dates and times of preparatory and initial control meetings in QCS.

#### 1.6.3.4 Accident/Safety Tracking.

The Government will issue safety comments, directions, or guidance whenever safety deficiencies are observed. The Government's safety comments will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of the safety comments. In addition, the Contractor shall utilize QCS to advise the Government of any accidents occurring on the jobsite. This brief supplemental entry is not to be considered as a substitute for completion of mandatory reports, e.g., ENG Form 3394 and OSHA Form 300.

#### 1.6.3.5 Features of Work

The Contractor shall include a complete list of the features of work in the QCS database. A feature of work may be associated with multiple pay activities. However, each pay activity (see subparagraph "Pay Activity Data" of paragraph "Finances") will only be linked to a single feature of work.

#### 1.6.3.6 QC Requirements

The Contractor shall develop and maintain a complete list of QC testing, transferred and installed property, and user training requirements in QCS. The Contractor shall update all data on these QC requirements as work progresses, and shall promptly provide this information to the Government via QCS.

#### 1.6.4 Submittal Management

The Government will provide the initial submittal register in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. The Contractor shall use QCS to track and transmit all submittals. ENG Form 4025, submittal transmittal form, and the submittal register update shall be produced using QCS. RMS will be

used to update, store and exchange submittal registers and transmittals, but will not be used for storage of actual submittals.

#### 1.6.5 Schedule

The Contractor shall develop a construction schedule consisting of pay activities, in accordance with or Section 01320A, PROJECT SCHEDULE. This schedule shall be input and maintained in the QCS database either manually or by using the Standard Data Exchange Format (SDEF) (see Section 01320A PROJECT SCHEDULE). The updated schedule data shall be included with each pay request submitted by the Contractor.

#### 1.6.6 Import/Export of Data

QCS includes the ability to export Contractor data to the Government and to import submittal register and other Government-provided data, and schedule data using SDEF.

#### 1.7 IMPLEMENTATION

Contractor use of QCS as described in the preceding paragraphs is mandatory. The Contractor shall ensure that sufficient resources are available to maintain its QCS database, and to provide the Government with regular database updates. QCS shall be an integral part of the Contractor's management of quality control.

#### 1.8 DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM

The Government-preferred method for Contractor's submission of updates, payment requests, correspondence and other data is by E-mail with file attachment(s). For locations where this is not feasible, the Contracting Officer may permit use of computer diskettes or CD-ROM for data transfer. Data on the disks or CDs shall be exported using the QCS built-in export function. If used, diskettes and CD-ROMs will be submitted in accordance with the following:

##### 1.8.1 File Medium

The Contractor shall submit required data on 3-1/2 inch double-sided high-density diskettes formatted to hold 1.44 MB of data, capable of running under Microsoft Windows 95 or newer. Alternatively, CD-ROMs may be used. They shall conform to industry standards used in the United States. All data shall be provided in English.

##### 1.8.2 Disk or CD-ROM Labels

The Contractor shall affix a permanent exterior label to each diskette and CD-ROM submitted. The label shall indicate in English, the QCS file name, full contract number, contract name, project location, data date, name and telephone number of person responsible for the data.

##### 1.8.3 File Names

The Government will provide the file names to be used by the Contractor with the QCS software.

#### 1.9 MONTHLY COORDINATION MEETING

The Contractor shall update the QCS database each workday. At least

monthly, the Contractor shall generate and submit an export file to the Government with schedule update and progress payment request. As required in Contract Clause "Payments", at least one week prior to submittal, the Contractor shall meet with the Government representative to review the planned progress payment data submission for errors and omissions. The Contractor shall make all required corrections prior to Government acceptance of the export file and progress payment request. Payment requests accompanied by incomplete or incorrect data submittals will be returned. The Government will not process progress payments until an acceptable QCS export file is received.

#### 1.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the requirements of this specification. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification.

-- End of Section --

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## SECTION 01320A

## PROJECT SCHEDULE

05/02

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

ER 1-1-11 (1995) Progress, Schedules, and Network Analysis Systems

## 1.2 QUALIFICATIONS

The Contractor shall designate an authorized representative who shall be responsible for the preparation of all required project schedule reports.

## PART 2 PRODUCTS (Not Applicable)

## PART 3 EXECUTION

## 3.1 GENERAL REQUIREMENTS

Pursuant to the Contract Clause, SCHEDULE FOR CONSTRUCTION CONTRACTS, a Project Schedule as described below shall be prepared. The scheduling of construction design and construction shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Subcontractors and suppliers working on the project shall also contribute in developing and maintaining an accurate Project Schedule. The approved Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

## 3.2 BASIS FOR PAYMENT

The schedule shall be the basis for measuring Contractor progress. Lack of an approved schedule or scheduling personnel will result in an inability of the Contracting Officer to evaluate Contractor's progress for the purposes of payment. Failure of the Contractor to provide all information, as specified below, shall result in the disapproval of the entire Project Schedule submission and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. In the case where Project Schedule revisions have been directed by the Contracting Officer and those revisions have not been included in the Project Schedule, the Contracting Officer may hold retainage up to the maximum allowed by contract, each payment period, until revisions to the Project Schedule have been made.

### 3.3 PROJECT SCHEDULE

The computer software system utilized by the Contractor to produce the Project Schedule shall be capable of providing all requirements of this specification. Failure of the Contractor to meet the requirements of this specification shall result in the disapproval of the schedule. Manual methods used to produce any required information shall require approval by the Contracting Officer.

#### 3.3.1 Use of the Critical Path Method

The Critical Path Method (CPM) of network calculation shall be used to generate the Project Schedule. The Contractor shall provide the Project Schedule in the Precedence Diagram Method (PDM).

#### 3.3.2 Level of Detail Required

The Project Schedule shall include an appropriate level of detail. Failure to develop or update the Project Schedule or provide data to the Contracting Officer at the appropriate level of detail, as specified by the Contracting Officer, shall result in the disapproval of the schedule. The Contracting Officer will use, but is not limited to, the following conditions to determine the appropriate level of detail to be used in the Project Schedule:

##### 3.3.2.1 Activity Durations

Contractor submissions shall follow the direction of the Contracting Officer regarding reasonable activity durations. Reasonable durations are those that allow the progress of activities to be accurately determined between payment periods (usually less than 2 percent of all non-procurement activities' Original Durations are greater than 20 days).

##### 3.3.2.2 Procurement Activities

Tasks related to the procurement of long lead materials or equipment shall be included as separate activities in the project schedule. Long lead materials and equipment are those materials that have a procurement cycle of over 90 days. Examples of procurement process activities include, but are not limited to: submittals, approvals, procurement, fabrication, and delivery.

##### 3.3.2.3 Critical Activities

The following activities shall be listed as separate line activities on the Contractor's project schedule:

- a. Submission and approval of mechanical/electrical layout drawings.
- b. Submission and approval of O & M manuals.
- c. Submission and approval of as-built drawings.
- d. Submission and approval of 1354 data and installed equipment lists.
- e. Submission and approval of testing and air balance (TAB).
- f. Submission of TAB specialist design review report.

- g. Submission and approval of fire protection specialist.
- h. Submission and approval of testing and balancing of HVAC plus commissioning plans and data.
- i. Air and water balance dates.
- j. HVAC commissioning dates.
- k. Controls testing plan.
- l. Controls testing.
- m. Performance Verification testing.
- n. Other systems testing, if required.
- o. Prefinal inspection.
- p. Correction of punchlist from prefinal inspection.
- q. Final inspection.

#### 3.3.2.4 Government Activities

Government and other agency activities that could impact progress shall be shown. These activities include, but are not limited to: approvals, environmental permit approvals by State regulators, inspections, utility tie-in, Government Furnished Equipment (GFE) and Notice to Proceed (NTP) for phasing requirements.

#### 3.3.2.5 Responsibility

All activities shall be identified in the project schedule by the party responsible to perform the work. Responsibility includes, but is not limited to, the subcontracting firm, contractor work force, or government agency performing a given task. Activities shall not belong to more than one responsible party. The responsible party for each activity shall be identified by the Responsibility Code.

#### 3.3.2.6 Work Areas

All activities shall be identified in the project schedule by the work area in which the activity occurs. Activities shall not be allowed to cover more than one work area. The work area of each activity shall be identified by the Work Area Code.

#### 3.3.2.7 Modification or Claim Number

Any activity that is added or changed by contract modification or used to justify claimed time shall be identified by a mod or claim code that changed the activity. Activities shall not belong to more than one modification or claim item. The modification or claim number of each activity shall be identified by the Mod or Claim Number. Whenever possible, changes shall be added to the schedule by adding new activities. Existing activities shall not normally be changed to reflect modifications.

#### 3.3.2.8 Bid Item

All activities shall be identified in the project schedule by the Bid Item to which the activity belongs. An activity shall not contain work in more than one bid item. The bid item for each appropriate activity shall be identified by the Bid Item Code.

#### 3.3.2.9 Phase of Work

All activities shall be identified in the project schedule by the phases of work in which the activity occurs. Activities shall not contain work in more than one phase of work. The project phase of each activity shall be by the unique Phase of Work Code.

#### 3.3.2.10 Category of Work

All Activities shall be identified in the project schedule according to the category of work which best describes the activity. Category of work refers, but is not limited, to the procurement chain of activities including such items as permits, submittals, approvals, procurement, fabrication, delivery, installation, start-up, and testing. The category of work for each activity shall be identified by the Category of Work Code.

#### 3.3.2.11 Feature of Work

All activities shall be identified in the project schedule according to the feature of work to which the activity belongs. Feature of work refers, but is not limited to, a work breakdown structure for the project. The feature of work for each activity shall be identified by the Feature of Work Code.

### 3.3.3 Scheduled Project Completion

The schedule interval shall extend from NTP to the contract completion date.

#### 3.3.3.1 Project Start Date

The schedule shall start no earlier than the date on which the NTP was acknowledged. The Contractor shall include as the first activity in the project schedule an activity called "Start Project". The "Start Project" activity shall have an "ES" constraint date equal to the date that the NTP was acknowledged, and a zero day duration.

#### 3.3.3.2 Constraint of Last Activity

Completion of the last activity in the schedule shall be constrained by the contract completion date. Calculation on project updates shall be such that if the early finish of the last activity falls after the contract completion date, then the float calculation shall reflect a negative float on the critical path. The Contractor shall include as the last activity in the project schedule an activity called "End Project". The "End Project" activity shall have an "LF" constraint date equal to the completion date for the project, and a zero day duration.

#### 3.3.3.3 Early Project Completion

In the event the project schedule shows completion of the project prior to the contract completion date, the Contractor shall identify those activities that have been accelerated and/or those activities that are scheduled in parallel to support the Contractor's "early" completion.

Contractor shall specifically address each of the activities noted in the narrative report at every project schedule update period to assist the Contracting Officer in evaluating the Contractor's ability to actually complete prior to the contract period.

#### 3.3.4 Interim Completion Dates

Contractually specified interim completion dates shall also be constrained to show negative float if the early finish date of the last activity in that phase falls after the interim completion date.

##### 3.3.4.1 Start Phase

The Contractor shall include as the first activity for a project phase an activity called "Start Phase X" where "X" refers to the phase of work. The "Start Phase X" activity shall have an "ES" constraint date equal to the date on which the NTP was acknowledged, and a zero day duration.

##### 3.3.4.2 End Phase

The Contractor shall include as the last activity in a project phase an activity called "End Phase X" where "X" refers to the phase of work. The "End Phase X" activity shall have an "LF" constraint date equal to the completion date for the project, and a zero day duration.

##### 3.3.4.3 Phase X

The Contractor shall include a hammock type activity for each project phase called "Phase X" where "X" refers to the phase of work. The "Phase X" activity shall be logically tied to the earliest and latest activities in the phase.

#### 3.3.5 Default Progress Data Disallowed

Actual Start and Finish dates shall not be automatically updated by default mechanisms that may be included in CPM scheduling software systems. Actual Start and Finish dates on the CPM schedule shall match those dates provided from Contractor Quality Control Reports. Failure of the Contractor to document the Actual Start and Finish dates on the Daily Quality Control report for every in-progress or completed activity, and failure to ensure that the data contained on the Daily Quality Control reports is the sole basis for schedule updating shall result in the disapproval of the Contractor's schedule and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes.

#### 3.3.6 Out-of-Sequence Progress

Activities that have posted progress without all preceding logic being satisfied (Out-of-Sequence Progress) will be allowed only on a case-by-case approval of the Contracting Officer. The Contractor shall propose logic corrections to eliminate all out of sequence progress or justify not changing the sequencing for approval prior to submitting an updated project schedule.

#### 3.3.7 Negative Lags

Lag durations contained in the project schedule shall not have a negative value.

### 3.4 PROJECT SCHEDULE SUBMISSIONS

The Contractor shall provide the submissions as described below. The data disk, reports, and network diagrams required for each submission are contained in paragraph SUBMISSION REQUIREMENTS.

#### 3.4.1 Preliminary Project Schedule Submission

The Preliminary Project Schedule, defining the Contractor's planned operations for the first 60 calendar days shall be submitted for approval within 20 calendar days after the NTP is acknowledged. The approved preliminary schedule shall be used for payment purposes not to exceed 60 calendar days after NTP.

#### 3.4.2 Initial Project Schedule Submission

The Initial Project Schedule shall be submitted for approval within 40 calendar days after NTP. The schedule shall provide a reasonable sequence of activities which represent work through the entire project and shall be at a reasonable level of detail.

#### 3.4.3 Periodic Schedule Updates

Based on the result of progress meetings, specified in "Periodic Progress Meetings," the Contractor shall submit periodic schedule updates. These submissions shall enable the Contracting Officer to assess Contractor's progress. If the Contractor fails or refuses to furnish the information and project schedule data, which in the judgement of the Contracting Officer or authorized representative is necessary for verifying the Contractor's progress, the Contractor shall be deemed not to have provided an estimate upon which progress payment may be made.

#### 3.4.4 Standard Activity Coding Dictionary

The Contractor shall use the activity coding structure defined in the Standard Data Exchange Format (SDEF) in ER 1-1-11, Appendix A. This exact structure is mandatory, even if some fields are not used.

### 3.5 SUBMISSION REQUIREMENTS

The following items shall be submitted by the Contractor for the preliminary submission, initial submission, and every periodic project schedule update throughout the life of the project:

#### 3.5.1 Data Disks

Two data disks containing the project schedule shall be provided. Data on the disks shall adhere to the SDEF format specified in ER 1-1-11, Appendix A.

##### 3.5.1.1 File Medium

Required data shall be submitted on 3.5 disks, formatted to hold 1.44 MB of data, under the MS-DOS Version 5. or 6.x, unless otherwise approved by the Contracting Officer.

##### 3.5.1.2 Disk Label

A permanent exterior label shall be affixed to each disk submitted. The

label shall indicate the type of schedule (Preliminary, Initial, Update, or Change), full contract number, project name, project location, data date, name and telephone number of person responsible for the schedule, and the MS-DOS version used to format the disk.

#### 3.5.1.3 File Name

Each file submitted shall have a name related to either the schedule data date, project name, or contract number. The Contractor shall develop a naming convention that will ensure that the names of the files submitted are unique. The Contractor shall submit the file naming convention to the Contracting Officer for approval.

#### 3.5.2 Narrative Report

A Narrative Report shall be provided with the preliminary, initial, and each update of the project schedule. This report shall be provided as the basis of the Contractor's progress payment request. The Narrative Report shall include: a description of activities along the 2 most critical paths, a description of current and anticipated problem areas or delaying factors and their impact, and an explanation of corrective actions taken or required to be taken. The narrative report is expected to relay to the Government, the Contractor's thorough analysis of the schedule output and its plans to compensate for any problems, either current or potential, which are revealed through that analysis.

#### 3.5.3 Approved Changes Verification

Only project schedule changes that have been previously approved by the Contracting Officer shall be included in the schedule submission. The Narrative Report shall specifically reference, on an activity by activity basis, all changes made since the previous period and relate each change to documented, approved schedule changes.

#### 3.5.4 Schedule Reports

The format for each activity for the schedule reports listed below shall contain: Activity Numbers, Activity Description, Original Duration, Remaining Duration, Early Start Date, Early Finish Date, Late Start Date, Late Finish Date, Total Float. Actual Start and Actual Finish Dates shall be printed for those activities in progress or completed.

##### 3.5.4.1 Activity Report

A list of all activities sorted according to activity number.

##### 3.5.4.2 Logic Report

A list of Preceding and Succeeding activities for every activity in ascending order by activity number. Preceding and succeeding activities shall include all information listed above in paragraph Schedule Reports. A blank line shall be left between each activity grouping.

##### 3.5.4.3 Total Float Report

A list of all incomplete activities sorted in ascending order of total float. Activities which have the same amount of total float shall be listed in ascending order of Early Start Dates. Completed activities shall not be shown on this report.



#### 3.5.4.4 Earnings Report

A compilation of the Contractor's Total Earnings on the project from the NTP until the most recent Monthly Progress Meeting. This report shall reflect the Earnings of specific activities based on the agreements made in the field and approved between the Contractor and Contracting Officer at the most recent Monthly Progress Meeting. Provided that the Contractor has provided a complete schedule update, this report shall serve as the basis of determining Contractor Payment. Activities shall be grouped by bid item and sorted by activity numbers. This report shall: sum all activities in a bid item and provide a bid item percent; and complete and sum all bid items to provide a total project percent complete. The printed report shall contain, for each activity: the Activity Number, Activity Description, Original Budgeted Amount, Total Quantity, Quantity to Date, Percent Complete (based on cost), and Earnings to Date.

#### 3.5.5 Network Diagram

The network diagram shall be required on the initial schedule submission and on monthly schedule update submissions. The network diagram shall depict and display the order and interdependence of activities and the sequence in which the work is to be accomplished. The Contracting Officer will use, but is not limited to, the following conditions to review compliance with this paragraph:

##### 3.5.5.1 Continuous Flow

Diagrams shall show a continuous flow from left to right with no arrows from right to left. The activity number, description, duration, and estimated earned value shall be shown on the diagram.

##### 3.5.5.2 Project Milestone Dates

Dates shall be shown on the diagram for start of project, any contract required interim completion dates, and contract completion dates.

##### 3.5.5.3 Critical Path

The critical path shall be clearly shown.

##### 3.5.5.4 Banding

Activities shall be grouped to assist in the understanding of the activity sequence. Typically, this flow will group activities by category of work, work area and/or responsibility.

##### 3.5.5.5 S-Curves

Earnings curves showing projected early and late earnings and earnings to date.

#### 3.6 PERIODIC PROGRESS MEETINGS

Progress meetings to discuss payment shall include a monthly onsite meeting or other regular intervals mutually agreed to at the preconstruction conference. During this meeting the Contractor shall describe, on an activity by activity basis, all proposed revisions and adjustments to the project schedule required to reflect the current status of the project.

The Contracting Officer will approve activity progress, proposed revisions, and adjustments as appropriate.

#### 3.6.1 Meeting Attendance

The Contractor's Project Manager and Scheduler shall attend the regular progress meeting.

#### 3.6.2 Update Submission Following Progress Meeting

A complete update of the project schedule containing all approved progress, revisions, and adjustments, based on the regular progress meeting, shall be submitted not later than 4 working days after the monthly progress meeting.

#### 3.6.3 Progress Meeting Contents

Update information, including Actual Start Dates, Actual Finish Dates, Remaining Durations, and Cost-to-Date shall be subject to the approval of the Contracting Officer. As a minimum, the Contractor shall address the following items on an activity by activity basis during each progress meeting.

##### 3.6.3.1 Start and Finish Dates

The Actual Start and Actual Finish dates for each activity currently in-progress or completed .

##### 3.6.3.2 Time Completion

The estimated Remaining Duration for each activity in-progress. Time-based progress calculations shall be based on Remaining Duration for each activity.

##### 3.6.3.3 Cost Completion

The earnings for each activity started. Payment will be based on earnings for each in-progress or completed activity. Payment for individual activities will not be made for work that contains quality defects. A portion of the overall project amount may be retained based on delays of activities.

##### 3.6.3.4 Logic Changes

All logic changes pertaining to NTP on change orders, change orders to be incorporated into the schedule, contractor proposed changes in work sequence, corrections to schedule logic for out-of-sequence progress, lag durations, and other changes that have been made pursuant to contract provisions shall be specifically identified and discussed.

##### 3.6.3.5 Other Changes

Other changes required due to delays in completion of any activity or group of activities include: 1) delays beyond the Contractor's control, such as strikes and unusual weather. 2) delays encountered due to submittals, Government Activities, deliveries or work stoppages which make re-planning the work necessary. 3) Changes required to correct a schedule which does not represent the actual or planned prosecution and progress of the work.

### 3.7 REQUESTS FOR TIME EXTENSIONS

In the event the Contractor requests an extension of the contract completion date, or any interim milestone date, the Contractor shall furnish the following for a determination as to whether or not the Contractor is entitled to an extension of time under the provisions of the contract: justification, project schedule data, and supporting evidence as the Contracting Officer may deem necessary. Submission of proof of delay, based on revised activity logic, duration, and costs (updated to the specific date that the delay occurred) is obligatory to any approvals.

#### 3.7.1 Justification of Delay

The project schedule shall clearly display that the Contractor has used, in full, all the float time available for the work involved with this request.

The Contracting Officer's determination as to the number of allowable days of contract extension shall be based upon the project schedule updates in effect for the time period in question, and other factual information. Actual delays that are found to be caused by the Contractor's own actions, which result in the extension of the schedule, will not be a cause for a time extension to the contract completion date.

#### 3.7.2 Submission Requirements

The Contractor shall submit a justification for each request for a change in the contract completion date of under 2 weeks based upon the most recent schedule update at the time of the NTP or constructive direction issued for the change. Such a request shall be in accordance with the requirements of other appropriate Contract Clauses and shall include, as a minimum:

- a. A list of affected activities, with their associated project schedule activity number.
- b. A brief explanation of the causes of the change.
- c. An analysis of the overall impact of the changes proposed.
- d. A sub-network of the affected area.

Activities impacted in each justification for change shall be identified by a unique activity code contained in the required data file.

#### 3.7.3 Additional Submission Requirements

For any requested time extension of over 2 weeks, the Contracting Officer may request an interim update with revised activities for a specific change request. The Contractor shall provide this disk within 4 days of the Contracting Officer's request.

### 3.8 DIRECTED CHANGES

If the NTP is issued for changes prior to settlement of price and/or time, the Contractor shall submit proposed schedule revisions to the Contracting Officer within 2 weeks of the NTP being issued. The proposed revisions to the schedule will be approved by the Contracting Officer prior to inclusion of those changes within the project schedule. If the Contractor fails to submit the proposed revisions, the Contracting Officer may furnish the Contractor with suggested revisions to the project schedule. The Contractor shall include these revisions in the project schedule until

revisions are submitted, and final changes and impacts have been negotiated. If the Contractor has any objections to the revisions furnished by the Contracting Officer, the Contractor shall advise the Contracting Officer within 2 weeks of receipt of the revisions. Regardless of the objections, the Contractor shall continue to update the schedule with the Contracting Officer's revisions until a mutual agreement in the revisions is reached. If the Contractor fails to submit alternative revisions within 2 weeks of receipt of the Contracting Officer's proposed revisions, the Contractor will be deemed to have concurred with the Contracting Officer's proposed revisions. The proposed revisions will then be the basis for an equitable adjustment for performance of the work.

### 3.9 OWNERSHIP OF FLOAT

Float available in the schedule, at any time, shall not be considered for the exclusive use of either the Government or the Contractor.

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## SECTION 01330

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**08/04**

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## SECTION 01330

## SUBMITTAL PROCEDURES

08/04

## PART 1 GENERAL

## 1.1 DEFINITIONS

## 1.1.1 Submittal

Contract Clauses "FAR 52.236-5, Material and Workmanship," paragraph (b) and "FAR 52.236-21, Specifications and Drawings for Construction," paragraphs (d), (e), and (f) apply to all "submittals."

## 1.1.2 Submittal Descriptions (SD)

Submittals requirements are specified in the technical sections. Submittals are identified by SD numbers and titles as follows.

## SD-01 Preconstruction Submittals

Certificates of insurance.  
Surety bonds.  
List of proposed subcontractors.  
List of proposed products.  
Construction Progress Schedule.  
Submittal register.  
Schedule of prices.  
Health and safety plan.  
Work plan.  
Quality control plan.  
Environmental protection plan.

## SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

## SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

## SD-04 Samples

Physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged.

Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

Field samples and mock-ups constructed on the project site establish standards by which the ensuring work can be judged. Includes assemblies or portions of assemblies which are to be incorporated into the project and those which will be removed at conclusion of the work.

#### SD-05 Design Data

Calculations, mix designs, analyses or other data pertaining to a part of work.

#### SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. (Testing must have been within three years of date of contract award for the project.)

Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports.

Daily checklists.

Final acceptance test and operational test procedure.

#### SD-07 Certificates

Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a supplier, installer or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

Confined space entry permits.

Text of posted operating instructions.

#### SD-08 Manufacturer's Instructions



Preprinted material describing installation of a product, system or material, including special notices and Material Safety Data sheets concerning impedances, hazards and safety precautions.

#### SD-09 Manufacturer's Field Reports

Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.

Factory test reports.

#### SD-10 Operation and Maintenance Data

Data that is furnished by the manufacturer, or the system provider, to the equipment operating and maintenance personnel. This data is needed by operating and maintenance personnel for the safe and efficient operation, maintenance and repair of the item.

#### SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

#### 1.1.3 Approving Authority

Office authorized to approve submittal.

#### 1.1.4 Work

As used in this section, on- and off-site construction required by contract documents, including labor necessary to produce submittals, construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction.

#### 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

##### SD-01 Preconstruction Submittals

Submittal register; G

#### 1.3 USE OF SUBMITTAL REGISTER [DATABASE]

Submittal register [database and submittal management program] will be delivered to the Contractor, by Contracting Officer [on 3 1/2 inch disk]. Register[ database] will have the following fields completed, to the extent that will be required by the Government during subsequent usage.

Column (c): Lists specification section in which submittal is required.

Column (d): Lists each submittal description (SD No. and type, e.g. SD-04 Drawings) required in each specification section.

Column (e): Lists one principal paragraph in specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting project requirements.

Column (f): Indicate approving authority for each submittal. A "G" indicates approval by Contracting Officer; a blank indicates approval by QC manager.

[The database and submittal management program will be extractable from the disk furnished to Contractor, for operation on Contractor's IBM compatible personal computer with 640kb RAM, a hard drive, and 3 1/2 inch high density floppy disk drive.]

Prepare and maintain submittal register, as the work progresses. [ Use electronic submittal register program furnished by the Government or any other format.] Do not change data which is output in columns (c), (d), (e), and (f) as delivered by Government; retain data which is output in columns (a), (g), (h), and (i) as approved.

#### 1.3.1 Submittal Register

Submit submittal register[ as an electronic database, using submittals management program furnished to Contractor]. Submit with quality control plan and project schedule required by Section 01450N DESIGN AND CONSTRUCTION QUALITY CONTROL and [Section 01321N NETWORK ANALYSIS SCHEDULES.] [Section 01320N DESIGN AND CONSTRUCTION PROGRESS DOCUMENTATION.] Verify that all submittals required for project are listed and add missing submittals. Complete the following on the register[ database]:

Column (a) Activity Number: Activity number from the project schedule.

Column (g) Contractor Submit Date: Scheduled date for approving authority to receive submittals.

Column (h) Contractor Approval Date: Date Contractor needs approval of submittal.

Column (i) Contractor Material: Date that Contractor needs material delivered to Contractor control.

#### 1.3.2 Contractor Use of Submittal Register

Update the following fields[ in the Government-furnished submittal register program or equivalent fields in program utilized by Contractor].

Column (b) Transmittal Number: Contractor assigned list of consecutive numbers.

Column (j) Action Code (k): Date of action used to record Contractor's review when forwarding submittals to QC.

Column (l) List date of submittal transmission.

Column (q) List date approval received.

### 1.3.3 Approving Authority Use of Submittal Register

Update the following fields[ in the Government-furnished submittal register program or equivalent fields in program utilized by Contractor].

Column (b).

Column (l) List date of submittal receipt.

Column (m) through (p).

Column (q) List date returned to Contractor.

### 1.3.4 Contractor Action Code and Action Code

Entries used shall be as follows (others may be prescribed by Transmittal Form):

NR - Not Received

AN - Approved as noted

A - Approved

RR - Disapproved, Revise, and Resubmit

### 1.3.5 Copies Delivered to the Government

Deliver one copy of submittal register updated by Contractor to Government with each invoice request. [Deliver in electronic format, unless a paper copy is requested by Contracting Officer.]

## 1.4 PROCEDURES FOR SUBMITTALS

### 1.4.1 Reviewing, Certifying, Approving Authority

QC organization shall be responsible for reviewing and certifying that submittals are in compliance with contract requirements. Approving authority on submittals is QC manager unless otherwise specified for specific submittal. At each "Submittal" paragraph in individual specification sections, a notation "G," following a submittal item, indicates Contracting Officer is approving authority for that submittal item.

### 1.4.2 Constraints

- a. Submittals listed or specified in this contract shall conform to provisions of this section, unless explicitly stated otherwise.
- b. Submittals shall be complete for each definable feature of work; components of definable feature interrelated as a system shall be submitted at same time.
- c. When acceptability of a submittal is dependent on conditions, items, or materials included in separate subsequent submittals, submittal will be returned without review.
- d. Approval of a separate material, product, or component does not

imply approval of assembly in which item functions.

#### 1.4.3 Scheduling

- a. Coordinate scheduling, sequencing, preparing and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow for potential requirements to resubmit.
- b. Except as specified otherwise, allow review period, beginning with receipt by approving authority, that includes at least [15] [\_\_\_\_\_] working days for submittals for QC Manager approval and [20] [\_\_\_\_\_] working days for submittals for Contracting Officer approval. Period of review for submittals with Contracting Officer approval begins when Government receives submittal from QC organization. Period of review for each resubmittal is the same as for initial submittal.
- c. For submittals requiring review by fire protection engineer, allow review period, beginning when Government receives submittal from QC organization, of [30] [\_\_\_\_\_] working days for return of submittal to the Contractor. Period of review for each resubmittal is the same as for initial submittal.

#### 1.4.4 Variations

Variations from contract requirements require Government approval pursuant to contract Clause entitled "FAR 52.236-21, Specifications and Drawings for Construction" and will be considered where advantageous to Government.

##### 1.4.4.1 Considering Variations

Discussion with Contracting Officer prior to submission, will help ensure functional and quality requirements are met and minimize rejections and resubmittals. When contemplating a variation which results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).

##### 1.4.4.2 Proposing Variations

When proposing variation, deliver written request to the Contracting Officer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to Government. If lower cost is a benefit, also include an estimate of the cost saving. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

##### 1.4.4.3 Warranting That Variations Are Compatible

When delivering a variation for approval, Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

##### 1.4.4.4 Review Schedule Is Modified

In addition to normal submittal review period, a period of [10] [\_\_\_\_\_] working days will be allowed for consideration by the Government of submittals with variations.

#### 1.4.5 Contractor's Responsibilities

- a. Determine and verify field measurements, materials, field construction criteria; review each submittal; and check and coordinate each submittal with requirements of the work and contract documents.
- b. Transmit submittals to QC organization in accordance with schedule on approved Submittal Register, and to prevent delays in the work, delays to Government, or delays to separate Contractors.
- c. Advise Contracting Officer of variation, as required by paragraph entitled "Variations."
- d. Correct and resubmit submittal as directed by approving authority. When resubmitting disapproved transmittals or transmittals noted for resubmittal, the Contractor shall provide copy of that previously submitted transmittal including all reviewer comments for use by approving authority. Direct specific attention in writing or on resubmitted submittal, to revisions not requested by approving authority on previous submissions.
- e. Furnish additional copies of submittal when requested by Contracting Officer, to a limit of 20 copies per submittal.
- f. Complete work which must be accomplished as basis of a submittal in time to allow submittal to occur as scheduled.
- g. Ensure no work has begun until submittals for that work have been returned as "approved," or "approved as noted", except to the extent that a portion of work must be accomplished as basis of submittal.

#### 1.4.6 QC Organization Responsibilities

- a. Note date on which submittal was received from Contractor on each submittal.
- b. Review each submittal; and check and coordinate each submittal with requirements of work and contract documents.
- c. Review submittals for conformance with project design concepts and compliance with contract documents.
- d. Act on submittals, determining appropriate action based on QC organization's review of submittal.
  - (1) When QC manager is approving authority, take appropriate action on submittal from the possible actions defined in paragraph entitled, "Actions Possible."
  - (2) When Contracting Officer is approving authority or when variation has been proposed, forward submittal to Government with certifying statement or return submittal marked "not reviewed" or "revise and resubmit" as appropriate. The QC organization's review of submittal determines appropriate action.
- e. Ensure that material is clearly legible.

- f. Stamp each sheet of each submittal with QC certifying statement or approving statement, except that data submitted in bound volume or on one sheet printed on two sides may be stamped on the front of the first sheet only.

(1) When approving authority is Contracting Officer, QC organization will certify submittals forwarded to Contracting Officer with the following certifying statement:

"I hereby certify that the (equipment) (material) (article) shown and marked in this submittal is that proposed to be incorporated with contract Number [\_\_\_\_], is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is submitted for Government approval.

Certified by Submittal Reviewer \_\_\_\_\_, Date \_\_\_\_\_  
(Signature when applicable)

Certified by QC Manager \_\_\_\_\_, Date \_\_\_\_\_"  
(Signature)

(2) When approving authority is QC Manager, QC Manager will use the following approval statement when returning submittals to Contractor as "Approved" or "Approved as Noted."

"I hereby certify that the (material) (equipment) (article) shown and marked in this submittal and proposed to be incorporated with contract Number [\_\_\_\_], is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is \_\_\_\_\_ approved for use.

Certified by Submittal Reviewer \_\_\_\_\_, Date \_\_\_\_\_  
(Signature when applicable)

Approved by QC Manager \_\_\_\_\_, Date \_\_\_\_\_"  
(Signature)

- g. Sign certifying statement or approval statement. The person signing certifying statements shall be QC organization member designated in the approved QC plan. The signatures shall be in original ink. Stamped signatures are not acceptable.
- h. Update submittal register [database ] as submittal actions occur and maintain the submittal register at project site until final acceptance of all work by Contracting Officer.
- i. Retain a copy of approved submittals at project site, including Contractor's copy of approved samples.

#### 1.4.7 Government's Responsibilities

When approving authority is Contracting Officer, the Government will:

- a. Note date on which submittal was received from QC manager, on each submittal for which the Contracting Officer is approving authority.
- b. Review submittals for approval within scheduling period specified and only for conformance with project design concepts and compliance with contract documents.

- c. Identify returned submittals with one of the actions defined in paragraph entitled "Actions Possible" and with markings appropriate for action indicated.

#### 1.4.8 Actions Possible

Submittals will be returned with one of the following notations:

- a. Submittals marked "not reviewed" will indicate submittal has been previously reviewed and approved, is not required, does not have evidence of being reviewed and approved by Contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals returned for lack of review by Contractor or for being incomplete, with appropriate action, coordination, or change.
- b. Submittals marked "approved" "approved as submitted" authorize Contractor to proceed with work covered.
- c. Submittals marked "approved as noted" or "approval except as noted; resubmission not required" authorize Contractor to proceed with work as noted provided Contractor takes no exception to the notations.
- d. Submittals marked "revise and resubmit" or "disapproved" indicate submittal is incomplete or does not comply with design concept or requirements of the contract documents and shall be resubmitted with appropriate changes. No work shall proceed for this item until resubmittal is approved.

### 1.5 FORMAT OF SUBMITTALS

#### 1.5.1 Transmittal Form

Transmit each submittal, except sample installations and sample panels, to office of approving authority. Transmit submittals with transmittal form prescribed by Contracting Officer and standard for project. The transmittal form shall identify Contractor, indicate date of submittal, and include information prescribed by transmittal form and required in paragraph entitled "Identifying Submittals." Process transmittal forms to record actions regarding sample panels and sample installations.

#### 1.5.2 Identifying Submittals

Identify submittals, except sample panel and sample installation, with the following information permanently adhered to or noted on each separate component of each submittal and noted on transmittal form. Mark each copy of each submittal identically, with the following:

- a. Project title and location.
- b. Construction contract number.
- c. Section number of the specification section by which submittal is required.
- d. Submittal description (SD) number of each component of submittal.

- e. When a resubmission, add alphabetic suffix on submittal description, for example, SD-10A, to indicate resubmission.
- f. Name, address, and telephone number of subcontractor, supplier, manufacturer and any other second tier Contractor associated with submittal.
- g. Product identification and location in project.

#### 1.5.3 Format for SD-02 Shop Drawings

- a. Shop drawings shall not be less than 8 1/2 by 11 inches nor more than 30 by 42 inches.
- b. Present 8 1/2 by 11 inches sized shop drawings as part of the bound volume for submittals required by section. Present larger drawings in sets.
- c. Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph entitled "Identifying Submittals."
- d. Dimension drawings, except diagrams and schematic drawings; prepare drawings demonstrating interface with other trades to scale. Shop drawing dimensions shall be the same unit of measure as indicated on the contract drawings. Identify materials and products for work shown.
- e. Drawings shall include the nameplate data, size and capacity. Also include applicable federal, military, industry and technical society publication references.

#### 1.5.4 Format of SD-03 Product Data and SD-08 Manufacturer's Instruction's

- a. Present product data submittals for each section as a complete, bound volume. Include table of contents, listing page and catalog item numbers for product data.
- b. Indicate, by prominent notation, each product which is being submitted; indicate specification section number and paragraph number to which it pertains.
- c. Supplement product data with material prepared for project to satisfy submittal requirements for which product data does not exist. Identify this material as developed specifically for project, with information and format as required for submission of SD-07 Certificates..
- e. Product data shall include the manufacturer's name, trade name, place of manufacture, and catalog model or number. Submittals shall also include applicable federal, military, industry and technical society publication references. Should manufacturer's data require supplemental information for clarification, the supplemental information shall be submitted as specified for SD-07 Certificates.
- f. Where equipment or materials are specified to conform to industry and technical society reference standards of the organizations such as American National Standards Institute (ANSI), ASTM



International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), and Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. The certificate shall state that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

- g. Submit manufacturer's instruction prior to installation.

#### 1.5.5 Format of SD-04 Samples

- a. Furnish samples in sizes below, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately same size as specified:
  - (1) Sample of Equipment or Device: Full size.
  - (2) Sample of Materials Less Than 2 by 3 inches: Built up to 8 1/2 by 11 inches.
  - (3) Sample of Materials Exceeding 8 1/2 by 11 inches: Cut down to 8 1/2 by 11 inches and adequate to indicate color, texture, and material variations.
  - (4) Sample of Linear Devices or Materials: 10 inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.
  - (5) Sample of Non-Solid Materials: Pint. Examples of non-solid materials are sand and paint.
  - (6) Color Selection Samples: 2 by 4 inches.
  - (7) Sample Panel: 4 by 4 feet.
  - (8) Sample Installation: 100 square feet.
- b. Samples Showing Range of Variation: Where variations are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle of range.
- c. Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples shall be in undamaged condition at time of use.
- d. Recording of Sample Installation: Note and preserve the notation of area constituting sample installation but remove notation at final clean up of project.
- e. When color, texture or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.

## 1.5.6 Format of SD-05 Design Data and SD-07 Certificates

- a. Provide design data and certificates on 8 1/2 by 11 inches paper. Provide a bound volume for submittals containing numerous pages.

## 1.5.7 Format of SD-06 Test Reports and SD-09 Manufacturer's Field Reports

- a. Provide reports on 8 1/2 by 11 inches paper in a complete bound volume.
- b. Indicate by prominent notation, each report in the submittal. Indicate specification number and paragraph number to which it pertains.

## 1.5.8 Format of SD-10 Operation and Maintenance (O&amp;M) Data

- a. O&M Data format shall comply with the requirements specified in Section 01781, Operation and Maintenance Data"

## 1.5.9 Format of SD-01 Preconstruction Submittals and SD-11 Closeout Submittalss

- a. When submittal includes a document which is to be used in project or become part of project record, other than as a submittal, do not apply Contractor's approval stamp to document, but to a separate sheet accompanying document.

## 1.6 QUANTITY OF SUBMITTALS

## 1.6.1 Number of Copies of SD-02 Shop Drawings

- a. Submit [six] [\_\_\_\_\_] copies of submittals of shop drawings requiring review and approval only by QC organization and [seven] [\_\_\_\_\_] copies of shop drawings requiring review and approval by Contracting Officer.

## 1.6.2 Number of Copies of SD-03 Product Data and SD-08 Manufacturer's Instructions

Submit in compliance with quantity requirements specified for shop drawings.

## 1.6.3 SD-04 Number of Samples

- a. Submit [two] [\_\_\_\_\_] samples, or [two] [\_\_\_\_\_] sets of samples showing range of variation, of each required item. One approved sample or set of samples will be retained by approving authority and one will be returned to Contractor.
- b. Submit one sample panel. Include components listed in technical section or as directed.
- c. Submit one sample installation, where directed.
- d. Submit one sample of non-solid materials.

## 1.6.4 Number of Copies SD-05 Design Data and SD-07 Certificates

- a. Submit in compliance with quantity requirements specified for shop drawings.

1.6.5 Number of Copies SD-06 Test Reports and SD-09 Manufacturer's Field Reportss

- b. Submit in compliance with quantity with quality requirements specified for shop drawings.

1.6.6 Number of Copies of SD-10 Operation and Maintenance Data

Submit [Five] [three] [\_\_\_\_\_] copies of O&M Data to the Contracting Officer for review and approval

1.6.7 Number of Copies of SD-01 Preconstruction Submittals and SD-11 Closeout Submittalss

- a. Unless otherwise specified, submit administrative submittals compliance with quantity requirements specified for shop drawings.

1.7 FORWARDING SUBMITTALS

1.7.1 Submittals Required from the Contractor

As soon as practicable after award of contract, and before procurement of fabrication, forward to the [Commander, NAVFAC Atlantic, Code CI4A1, 6506 Hampton Boulevard, Norfolk, Virginia, 23508-1278] [Architect-Engineer: [\_\_\_\_\_] ,] submittals required in the technical sections of this specification, including shop drawings, product data and samples. One copy of the transmittal form for all submittals shall be forwarded to the Resident Officer in Charge of Construction.

[The Architect-Engineer for this project] [NAVFAC Atlantic] will review and approve for the Contracting Officer those submittals reserved for Contracting Officer approval to verify submittals comply with the contract requirements.

1.7.1.1 O&M Data

[The Architect-Engineer for this project] [NAVFAC Atlantic] will review and approve for the Contracting Officer O&M Data to verify the submittals comply with the contract requirements.; submit data specified for a given item within 30 calendar days after the item is delivered to the contract site.

- a. In the event the Contractor fails to deliver O&M Data within the time limits specified, the Contracting Officer may withhold from progress payments 50 percent of the price of the item with which such O&M Data are applicable.

[1.7.1.2 Submittals Reserved for NAVFAC Atlantic Approval

As an exception to the standard submittal procedure specified above, submit the following to the Commander, NAVFAC Atlantic, Code CI4A1, 6506 Hampton Blvd, Norfolk, VA 23508-1278:

[a. Section [\_\_\_\_\_] , "[\_\_\_\_\_]": Pile driving records]

[b. Section [\_\_\_\_\_] , "[\_\_\_\_\_]": All fire protection system submittals]

- [c. Section [\_\_\_\_], "[\_\_\_\_]": All fire alarm system submittals]
- [d. Section 15901N SPACE TEMPERATURE CCONTROL SYSTEMS: SD-06 field test report submittals]
- [e. Section 15910N DIRECT DIGITAL CONTROL SYSTEMS: SD-06 field test report submittals]
- [f. Section 15950N HVAC TESTING/ADJUSTING/BALANCING: All submittals]
- [g. Section 15951N TESTING INDUSTRIAL VENTILATION SYSTEMS: All submittals]
- [h. Section 16272 THREE-PHASE PAD POUNTED TRANSFORMERS: All submittals]
- [i. Section 16273 SINGLE-PHASE PAD POUNTED TRANSFORMERS: All submittals]
- [j. Section 16301N OVERHEAD TRANSMISSION AND DISTRIBUTION: Transformer submittals]
- [k. Section 16360 SECONDARY UNIT SUBSTATIONS: Transformer submittals]
- [l. Section 16361N PRIMARY UNIT SUBSTATIONS: Transformer submittals]

] [1.7.1.3 Overseas Shop Drawing Submittals

All submittals shall be sent via overnight express mail service. All costs associated with the overnight express mail service shall be borne by the construction Contractor. Costs associated with the overnight express mail of submittals related to proposed submittal variances of resubmittals necessary as a result of noncompliant or incomplete Contractor submittals shall be the responsibility of the Contractor.

]

1.8 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.8.1 Designer of Record Approved

Designer of Record approval is required for extensions of design, critical materials, any deviations from the solicitation, the accepted proposal, or the completed design, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction", they are considered to be "shop drawings". The Contractor shall provide the Government the number of copies designated hereinafter of all Designer of Record approved submittals. The Government may review any or all Designer of Record approved submittals for conformance to the Solicitation and Accepted Proposal. The Government will review all submittals designated as deviating from the Solicitation or Accepted Proposal, as described below. Design submittals shall be in accordance with Section [\_\_\_\_] DESIGN AFTER AWARD. Generally, design submittals should be identified as SD-05 DESIGN DATA submittals.

### 1.8.2 Government Approved

Government approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Government approval is required for any deviations from the Solicitation or Accepted Proposal and other items as designated by the Contracting Officer.

Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

### 1.8.3 Government Reviewed Design or Extension of Design

The Government will review all (\_\_\_\_%) and (\_\_\_\_%) design submittals for conformance with the technical requirements of the solicitation. Section [\_\_\_\_] DESIGN AFTER AWARD covers the design submittal and review process in detail. Government review is required for extension of design construction submittals, used to define contract conformity, and for deviation from the completed design. Review will be only for conformance with the contract requirements. Included are only those construction submittals for which the Designer of Record design documents do not include enough detail to ascertain contract compliance. The Government may, but is not required, to review extensions of design such as structural steel or reinforcement shop drawings.

### 1.8.4 Information Only

All submittals not requiring Government approval will be for information only. All submittals not requiring Designer of Record or Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above. All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

## 1.9 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory design, general method of construction, materials, detailing and other information appear to meet the Solicitation and Accepted Proposal. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for [dimensions, the design of adequate connections and details, and the satisfactory construction of all work] [design, dimensions, all design extensions, such as the design of adequate connections and details, etc., and the satisfactory construction of all work]. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

## 1.10 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. The Contractor shall make all corrections required by the Contracting Officer, obtain the Designer of Record's approval when applicable, and promptly furnish a corrected

submittal in the form and number of copies specified for the initial submittal. Any "information only" submittal found to contain errors or unapproved deviations from the Solicitation or Accepted Proposal shall be resubmitted as one requiring "approval" action, requiring both Designer of Record and Government approval. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Contracting Officer.

#### 1.11 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained. No payment for materials incorporated in the work will be made if all required Designer of Record or required Government approvals have not been obtained. No payment will be made for any materials incorporated into the work for any conformance review submittals or information only submittals found to contain errors or deviations from the Solicitation or Accepted Proposal.

#### 1.12 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) System Manager and the Designer of Record, if applicable, and each item shall be stamped, signed, and dated by the CQC System Manager indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

#### 1.13 SUBMITTAL REGISTER

At the end of this section is a submittal [register] [list] showing items of equipment and materials for which submittals are required by the specifications; this list may not be all inclusive and additional submittals may be required. [The Contractor shall maintain a submittal register for the project in accordance with Section 01312A QUALITY CONTROL SYSTEM (QCS).] [The Government will provide the initial submittal register in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. The Contractor shall track all submittals.]

The Designer of Record shall develop a complete list of submittals during

design. The Designer of Record shall identify required submittals in the specifications, and use the list to prepare the Submittal Register. The list may not be all inclusive and additional submittals may be required by other parts of the contract. The Contractor is required to complete the submittal register and submit it to the Contracting Officer for approval within 30 calendar days after Notice to Proceed. The approved submittal register will serve as a scheduling document for submittals and will be used to control submittal actions throughout the contract period. The submit dates and need dates used in the submittal register shall be coordinated with dates in the Contractor prepared progress schedule. Updates to the submittal register showing the Contractor action codes and actual dates with Government action codes and actual dates shall be submitted monthly or until all submittals have been satisfactorily completed. When the progress schedule is revised, the submittal register shall also be revised and both submitted for approval.

#### 1.14 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of [\_\_\_\_\_] calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals. An additional [\_\_\_\_\_] calendar days shall be allowed and shown on the register for review and approval of submittals for [food service equipment] [and] [refrigeration and HVAC control systems].

#### 1.15 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms [will be furnished to the Contractor] [are included in the QCS software that the Contractor is required to use for this contract].

This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

#### 1.16 SUBMITTAL PROCEDURES

Submittals shall be made as follows:

##### 1.16.1 Procedures

[\_\_\_\_\_] [\_\_\_\_\_] [The Government will further discuss detailed submittal procedures with the Contractor at the [Preconstruction Conference] [Post-Award Conference]].

##### 1.16.2 Deviations

For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted

deviations.

#### 1.17 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

#### 1.18 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. [ ] copies of the submittal will be retained by the Contracting Officer and [ ] copies of the submittal will be returned to the Contractor. If the Government performs a conformance review of other Designer of Record approved submittals, the submittals will be so identified and returned, as described above.

#### 1.19 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe. For design-build construction the Government will retain [ ] copies of information only submittals.

#### 1.20 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:



|   |          |
|---|----------|
| CONTRACTOR  |          |
| (Firm Name)   |          |
| _____   | Approved |
| _____ Approved with corrections as noted on submittal data and/or attached sheets(s). |          |
| SIGNATURE: _____  |          |
| TITLE: _____  |          |
| DATE: _____   |          |

For design-build construction, both the Contractor Quality Control System Manager and the Designer of Record shall stamp and sign to certify that the submittal meets contract requirements.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

# SUBMITTAL REGISTER

CONTRACT NO.

| TITLE AND LOCATION<br>UAC and Shoot House |                   |              |                                  |           |                                 | CONTRACTOR                    |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|---|-------------------|--------------|----------------------------------|-----------|---------------------------------|-------------------------------|--------------------------|--------------------------|----------------------|----------------------|---|----------------------------------|----------------------------------|----------------|----------------------|--|---------|
| ACTIVITY<br>NO                            | TRANSMITTAL<br>NO | SPEC<br>SECT | DESCRIPTION<br>ITEM SUBMITTED    | PARAGRAPH | GOVT<br>CLASS<br>SIFIC<br>ATION | CONTRACTOR:<br>SCHEDULE DATES |                          |                          | CONTRACTOR<br>ACTION |                      | DATE FWD<br>TO APPR<br>AUTH/<br><br>DATE RCD<br>FROM<br>CONTR | APPROVING AUTHORITY              |                                  |                |                      | MAILED<br>TO<br>CONTR/<br><br>DATE RCD<br>FRM APPR<br>AUTH | REMARKS |
|   |                   |              |                                  |           |                                 | SUBMIT                        | APPROVAL<br>NEEDED<br>BY | MATERIAL<br>NEEDED<br>BY | ACTION<br>CODE       | DATE<br>OF<br>ACTION |   | DATE FWD<br>TO OTHER<br>REVIEWER | DATE RCD<br>FROM OTH<br>REVIEWER | ACTION<br>CODE | DATE<br>OF<br>ACTION |  |         |
| (a)                                       | (b)               | (c)          | (d)                              | (e)       | (f)                             | (g)                           | (h)                      | (i)                      | (j)                  | (k)                  | (l)   | (m)                              | (n)                              | (o)            | (p)                  | (q)  | (r)     |
|   |                   | 01330        | SD-01 Preconstruction Submittals |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Submittal register               | 1.3.1     | G                               |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 01335        | SD-11 Closeout Submittals        |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SPiRiT Documentation Notebook    |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | DO                               |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Documentation Notebook           |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 01355A       | SD-01 Preconstruction Submittals |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Environmental Protection Plan    | 1.7       | G PO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 01356A       | SD-07 Certificates               |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Mill Certificate or Affidavit    | 2.1.3     |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 01452        | SD-07 Certificates               |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Special Inspector                | 1.3       | G                               |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 01525        | SD-01 Preconstruction Submittals |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Accident Prevention Plan (APP)   | 1.7       | G                               |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Activity Hazard Analysis (AHA)   | 1.8       | G                               |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Crane Critical Lift Plan         | 1.7.1     | G                               |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Proof of qualification           |           | G                               |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports               |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Reports                          | 1.12      |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Accident Reports                 | 1.12.1    |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Monthly Exposure Reports         | 1.12.3    |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Crane Reports                    | 1.12.4    |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Regulatory Citations and         |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Violations                       |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates               |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Confined Space Entry Permit      | 1.9       |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |

## SUBMITTAL REGISTER

CONTRACT NO.

| TITLE AND LOCATION<br>UAC and Shoot House |                   |              |   |           |  | CONTRACTOR                    |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|---|-------------------|--------------|---|-----------|--|-------------------------------|--------------------------|--------------------------|----------------------|----------------------|---|----------------------------------|----------------------------------|----------------|----------------------|--|---------|
| ACTIVITY<br>NO                            | TRANSMITTAL<br>NO | SPEC<br>SECT | DESCRIPTION<br>ITEM SUBMITTED                 | PARAGRAPH | GOVT<br>CLASSIFICATION<br>OR<br>REVIEW | CONTRACTOR:<br>SCHEDULE DATES |                          |                          | CONTRACTOR<br>ACTION |                      | DATE FWD<br>TO APPR<br>AUTH/<br><br>DATE RCD<br>FROM<br>CONTR | APPROVING AUTHORITY              |                                  |                |                      | MAILED<br>TO<br>CONTR/<br><br>DATE RCD<br>FRM APPR<br>AUTH | REMARKS |
|   |                   |              |   |           |  | SUBMIT                        | APPROVAL<br>NEEDED<br>BY | MATERIAL<br>NEEDED<br>BY | ACTION<br>CODE       | DATE<br>OF<br>ACTION |   | DATE FWD<br>TO OTHER<br>REVIEWER | DATE RCD<br>FROM OTH<br>REVIEWER | ACTION<br>CODE | DATE<br>OF<br>ACTION |  |         |
| (a)                                       | (b)               | (c)          | (d)   | (e)       | (f)                                    | (g)                           | (h)                      | (i)                      | (j)                  | (k)                  | (l)   | (m)                              | (n)                              | (o)            | (p)                  | (q)  | (r)     |
|   |                   | 01525        | Hot work permit                               | 1.9       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 01780A       | SD-02 Shop Drawings                           |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | As-Built Drawings                             | 1.2.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data                            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | As-Built Record of Equipment and<br>Materials | 1.2.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Warranty Management Plan                      | 1.3.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Warranty Tags                                 | 1.3.5     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Final Cleaning                                | 1.6       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 02220        | SD-07 Certificates                            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Demolition plan                               | 1.10      |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Notifications                                 | 1.4.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 02300S       | SD-06 Test Reports                            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Testing                                       | 3.18      |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Testing                                       | 3.18      | G RE                                   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 02360        | SD-03 Product Data                            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Termiticide Application Plan                  | 3.4       | G G                                    |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Termiticides                                  | 2.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Foundation Exterior                           | 3.2.3     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Utilities and Vents                           | 3.2.4     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Crawl and Plenum Air Spaces                   | 3.2.5     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Verification of Measurement                   | 3.5       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Application Equipment                         | 3.4.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Warranty                                      | 1.7       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-04 Samples                                 |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |

| SUBMITTAL REGISTER                        |                   |              |  |           |  |                               |                          |                          |                      |                      |   | CONTRACT NO.                     |                                  |                |                      |  |         |
|---|-------------------|--------------|--|-----------|--|-------------------------------|--------------------------|--------------------------|----------------------|----------------------|---|----------------------------------|----------------------------------|----------------|----------------------|--|---------|
| TITLE AND LOCATION<br>UAC and Shoot House |                   |              |  |           |  | CONTRACTOR                    |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
| ACTIVITY<br>NO                            | TRANSMITTAL<br>NO | SPEC<br>SECT | DESCRIPTION<br>ITEM SUBMITTED              | PARAGRAPH | GOVT<br>CLASSIFICATION<br>OR<br>REVIEW | CONTRACTOR:<br>SCHEDULE DATES |                          |                          | CONTRACTOR<br>ACTION |                      | DATE FWD<br>TO APPR<br>AUTH/<br><br>DATE RCD<br>FROM<br>CONTR | APPROVING AUTHORITY              |                                  |                |                      | MAILED<br>TO<br>CONTR/<br><br>DATE RCD<br>FRM APPR<br>AUTH | REMARKS |
|   |                   |              |  |           |  | SUBMIT                        | APPROVAL<br>NEEDED<br>BY | MATERIAL<br>NEEDED<br>BY | ACTION<br>CODE       | DATE<br>OF<br>ACTION |   | DATE FWD<br>TO OTHER<br>REVIEWER | DATE RCD<br>FROM OTH<br>REVIEWER | ACTION<br>CODE | DATE<br>OF<br>ACTION |  |         |
| (a)                                       | (b)               | (c)          | (d)  | (e)       | (f)                                    | (g)                           | (h)                      | (i)                      | (j)                  | (k)                  | (l)   | (m)                              | (n)                              | (o)            | (p)                  | (q)  | (r)     |
|   |                   | 02360        | Termiticides                               | 2.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports                         |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Equipment Calibration and Tank Measurement | 3.4.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Soil Moisture                              | 3.3.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Quality Assurance                          | 1.8       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                         |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Qualifications                             | 1.3       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 02370        | SD-02 Shop Drawings                        |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Erosion Control                            | 3.2.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Seed Establishment Period                  | 2.5.12.1  |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Maintenance Record                         | 3.6       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data                         |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Geosynthetic Binders                       | 2.2.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Hydraulic Mulch                            | 2.3.10    |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Geotextile Fabrics                         | 2.4       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Equipment                                  | 1.4       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports                         |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Geosynthetic Binders                       | 2.2.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Hydraulic Mulch                            | 2.3.10    |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Geotextile Fabrics                         | 2.4       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                         |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Geotextile Fabrics                         | 2.4       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Seed                                       | 2.5.12    |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Asphalt Adhesive                           | 2.3.8     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Wood By-Products                           | 2.3.6     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |

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|   |                   | 02370        | Wood Cellulose Fiber                  | 2.3.3     |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   | 02621        | SD-07 Certificates                    |           |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Materials                             | 2.1       |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   | 02630        | SD-03 Product Data                    |           |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Placing Pipe                          | 3.3       |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | SD-07 Certificates                    |           |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Hydrostatic Test on Watertight Joints | 2.7       |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Determination of Density              | 3.7.5     |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Frame and Cover for Gratings          | 2.3.7     |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   | 02731        | SD-06 Test Reports                    |           |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Sampling and Testing                  | 1.6       |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Density Tests                         | 3.12      |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   | 02821A       | SD-07 Certificates                    |           |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Chain Link Fence                      | 2.1.1     |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   | 02921        | SD-03 Product Data                    |           |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Fertilizer                            | 2.4       |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | SD-07 Certificates                    |           |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | seed                                  | 2.1       |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   | 03307        | SD-03 Product Data                    |           |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Air-Entraining Admixture              | 2.1.3.1   |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Accelerating Admixture                | 2.1.3.2   |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Water-Reducing or Retarding Admixture | 2.1.3.3   |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Curing Materials                      | 2.1.12    |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Reinforcing Steel                     | 2.1.5     |  |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |

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|   |                   | 03307        | Expansion Joint Filler Strips,<br>Premolded | 2.1.6     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Joint Sealants - Field Molded<br>Sealants   | 2.1.7     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Waterstops                                  | 2.1.8     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Batching and Mixing Equipment               | 3.1.5.3   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Conveying and Placing Concrete              | 3.2       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports                          |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Aggregates                                  | 2.1.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Concrete Mixture Proportions                | 1.4.3     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                          |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Cementitious Materials                      | 2.1.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Aggregates                                  | 2.1.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 03410A       | SD-02 Shop Drawings                         |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Precast/Prestressed Units                   | 1.3       | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data                          |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Precast/Prestressed Units                   | 1.3       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports                          |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Tests                                       | 2.2       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 04200        | SD-02 Shop Drawings                         |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Structural Masonry                          | 1.5       | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data                          |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Flashing                                    | 2.17      | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Water-Repellant Admixture                   | 2.9       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Cold Weather Installation                   | 3.1.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-04 Samples                               |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |

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|   |                   | 04200        | Concrete Masonry Units (CMU)    | 2.4       | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Anchors, Ties, and Bar          | 2.11      | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Positioners                     |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Expansion-Joint Materials       | 2.16      | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Joint Reinforcement             | 2.12      | G G                                      |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | SD-05 Design Data               |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Pre-mixed Mortar                | 2.8.5     | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Unit Strength Method            | 1.5.2     | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | SD-06 Test Reports              |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Efflorescence Test              | 3.23.3    |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Field Testing of Mortar         | 3.26.1    | G G                                      |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Field Testing of Grout          | 3.23.2    | G G                                      |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Prism tests                     | 3.23.4    | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Special Inspection              | 1.5.1     | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | SD-07 Certificates              |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Concrete Masonry Units (CMU)    | 2.4       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Control Joint Keys              | 2.14      |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Anchors, Ties, and Bar          | 2.11      |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Positioners                     |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Expansion-Joint Materials       | 2.16      |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Joint Reinforcement             | 2.12      |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Reinforcing Steel Bars and Rods | 2.13      |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Masonry Cement                  | 2.8.4     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Mortar Coloring                 |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Precast Concrete Items          | 2.5       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Admixtures for Masonry Mortar   | 2.8.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |

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|   |                   | 04200        | Admixtures for Grout                     | 2.10.1    |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-08 Manufacturer's Instructions        |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Masonry Cement                           | 2.8.4     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 05120        | SD-02 Shop Drawings                      |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Erection Plan                            | 1.7.2.2   | G RO   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Fabrication drawings                     | 1.7.1     | G RO   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Shop primer                              | 2.4       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Class B coating                          | 2.4       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Bolts, nuts, and washers                 | 2.2       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Steel                                    | 2.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Bolts, nuts, and washers                 | 2.2       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Shop primer                              | 2.4       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Welding electrodes and rods              | 2.3.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Nonshrink grout                          | 2.3.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | AISC Quality Certification               | 1.5       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Overhead, top running crane rail<br>beam | 1.7.2.1   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Welding procedures and<br>qualifications | 1.7.2.3   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 06100A       | SD-02 Shop Drawings                      |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Structural Wood Members                  | 2.1.6     | G RO   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Installation of Framing                  | 3.1       | G RO   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Nailers and Nailing Strips               | 3.6.4     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |



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| TITLE AND LOCATION<br>UAC and Shoot House |                   |              |  |           |  | CONTRACTOR                    |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
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|   |                   |              |  |           |  | SUBMIT                        | APPROVAL<br>NEEDED<br>BY | MATERIAL<br>NEEDED<br>BY | ACTION<br>CODE       | DATE<br>OF<br>ACTION |   | DATE FWD<br>TO OTHER<br>REVIEWER | DATE RCD<br>FROM OTH<br>REVIEWER | ACTION<br>CODE | DATE<br>OF<br>ACTION |  |         |
| (a)                                       | (b)               | (c)          | (d)                                      | (e)       | (f)                                    | (g)                           | (h)                      | (i)                      | (j)                  | (k)                  | (l)   | (m)                              | (n)                              | (o)            | (p)                  | (q)  | (r)     |
|   |                   | 06100A       | SD-03 Product Data                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Structural Wood Members                  | 2.1.6     | G RO                                   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Qualifications                           | 1.4       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Grading and Marking                      | 2.1.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Insulation                               | 2.3       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 06200A       | SD-03 Product Data                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Wood Items, Siding, and Trim             | 2.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-04 Samples                            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Moldings                                 | 2.1.10    |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Fascias and Trim                         | 2.1.9     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 06410A       | SD-02 Shop Drawings                      |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Shop Drawings                            | 1.8       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Installation                             | 3.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Wood Materials                           | 2.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-04 Samples                            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Plastic Laminates                        | 2.3       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Cabinet Hardware                         | 2.7       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Quality Assurance                        | 1.4       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Laminate Clad Casework                   | 3.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 07131        | SD-03 Product Data                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Elastomeric waterproofing sheet material | 2.1       | G RO                                   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Protection board                         | 2.5       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |

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|   |                   | 07131        | Primers, adhesives, and mastics          | 2.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Elastomeric waterproofing sheet material | 2.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 07190        | SD-03 Product Data                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Water repellents                         | 2.2       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Water absorption                         | 1.3.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Water absorption                         | 2.3.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Accelerated weathering                   | 2.3.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Resistance to chloride ion penetration   | 2.3.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Moisture vapor transmission              | 1.3.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Moisture vapor transmission              | 2.3.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Scaling resistance                       | 2.3.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Water Penetration and Leakage            | 1.3.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Manufacturer's qualifications            | 1.3.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Applicator's qualifications              | 1.3.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Evidence of acceptable variation         | 1.3.3     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Warranty                                 | 1.12      |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-08 Manufacturer's Instructions        |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Application                              | 3.4       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | material safety data sheets              | 1.7.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 07311        | SD-03 Product Data                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Shingles                                 | 2.1.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |

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|   |                   |              |                                   |           |                                 | SUBMIT                        | APPROVAL<br>NEEDED<br>BY | MATERIAL<br>NEEDED<br>BY | ACTION<br>CODE       | DATE<br>OF<br>ACTION |  | DATE FWD<br>TO OTHER<br>REVIEWER | DATE RCD<br>FROM OTH<br>REVIEWER | ACTION<br>CODE | DATE<br>OF<br>ACTION |  |         |
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|   |                   | 07311        | SD-04 Samples                     |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Shingles                          | 2.1.1     | G RO                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Color charts                      | 2.1.1     | G RO                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-08 Manufacturer's Instructions |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Application                       | 3.3       |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   | 07600        | SD-02 Shop Drawings               |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Base flashing                     | 3.1.11    | G RO                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Flashing at roof penetrations     | 3.1.27    | G RO                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Copings                           | 3.1.30    | G RO                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Drip edge                         | 3.1.16    | G RO                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Expansion Joints                  | 3.1.26    | G RO                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-11 Closeout Submittals         |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Quality Control Plan              | 3.5       |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   | 07920        | SD-03 Product Data                |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Sealants                          | 2.1       |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Primers                           | 2.2       |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Bond breakers                     | 2.3       |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Backstops                         | 2.4       |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Sealant                           | 3.3.6     |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   | 08110        | SD-02 Shop Drawings               |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Doors                             | 2.1       | G RO                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Frames                            | 2.7       | G RO                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Accessories                       | 2.5       |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Weatherstripping                  | 2.9       |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Schedules                         | 1.4       | G RO                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |

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|   |                   |              |                                   |           |  | SUBMIT                        | APPROVAL<br>NEEDED<br>BY | MATERIAL<br>NEEDED<br>BY | ACTION<br>CODE       | DATE<br>OF<br>ACTION |   | DATE FWD<br>TO OTHER<br>REVIEWER | DATE RCD<br>FROM OTH<br>REVIEWER | ACTION<br>CODE | DATE<br>OF<br>ACTION |  |         |  |
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|   |                   | 08110        | SD-03 Product Data                |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Doors                             | 2.1       | G RO                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Frames                            | 2.7       | G RO                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Accessories                       | 2.5       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Weatherstripping                  | 2.9       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   | 08710        | SD-02 Shop Drawings               |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Hardware schedule                 | 1.3       | G RO                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Keying system                     | 2.3.8     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | SD-03 Product Data                |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Hardware items                    | 2.3       | G RO                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | SD-08 Manufacturer's Instructions |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Installation                      | 3.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | SD-10 Operation and Maintenance   |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Data                              |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Hardware Schedule                 | 1.3       | G RO                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | SD-11 Closeout Submittals         |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Key bitting                       | 1.4       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   | 08800        | SD-02 Shop Drawings               |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Installation                      | 3.2.7     | G RO                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | SD-03 Product Data                |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Plastic Glazing                   | 2.3       | G RO                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Glazing Accessories               | 1.3       | G RO                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | SD-04 Samples                     |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Plastic Sheet                     | 3.2.7     | G RO                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Glazing Compound                  | 2.4.2     | G RO                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |
|   |                   |              | Glazing Tape                      | 2.4.5     | G RO                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |  |

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|   |                   |              |                                   |           |  | SUBMIT                        | APPROVAL<br>NEEDED<br>BY | MATERIAL<br>NEEDED<br>BY | ACTION<br>CODE       | DATE<br>OF<br>ACTION |   | DATE FWD<br>TO OTHER<br>REVIEWER | DATE RCD<br>FROM OTH<br>REVIEWER | ACTION<br>CODE | DATE<br>OF<br>ACTION |  |         |
| (a)                                       | (b)               | (c)          | (d)                               | (e)       | (f)  | (g)                           | (h)                      | (i)                      | (j)                  | (k)                  | (l)   | (m)                              | (n)                              | (o)            | (p)                  | (q)  | (r)     |
|   |                   | 08800        | SD-07 Certificates                |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Plastic Glazing                   | 2.3       | G RO   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-08 Manufacturer's Instructions |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Setting and sealing materials     | 2.4       | G RO   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Glass setting                     | 3.2       | G RO   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 09900        | SD-03 Product Data                |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Coating                           | 2.1       | G RO   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Manufacturer's Technical Data     | 2.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Sheets                            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Sealant                           | 3.3.5     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-04 Samples                     |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Color                             | 1.9       | G RO   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Applicator's qualifications       | 1.3       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Qualification Testing             | 1.4.1.2   | G RO   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-08 Manufacturer's Instructions |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Mixing                            | 3.8.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Manufacturer's Material Safety    | 1.7.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Data Sheets                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-10 Operation and Maintenance   |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Data                              |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Coatings:                         | 2.1       | G RO   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 10100        | SD-03 Product Data                |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Visual Display Boards             | 1.3       | G RO   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Visual Display Boards             | 1.3       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |

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|   |                   |              |                               |           |                                 | SUBMIT                        | APPROVAL<br>NEEDED<br>BY | MATERIAL<br>NEEDED<br>BY | ACTION<br>CODE       | DATE<br>OF<br>ACTION |   | DATE FWD<br>TO OTHER<br>REVIEWER | DATE RCD<br>FROM OTH<br>REVIEWER | ACTION<br>CODE | DATE<br>OF<br>ACTION |  |         |
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|   |                   | 10153        | SD-02 Shop Drawings           |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Installation                  | 3.1       | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data            |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Toilet Partition System       | 1.3       | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-04 Samples                 |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Colors and Finishes           | 2.5       | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 10201        | SD-02 Shop Drawings           |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Wall louvers                  | 2.2       |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-04 Samples                 |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Wall louvers                  | 2.2       | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Door louvers                  | 2.3       | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 10650        | SD-02 Shop Drawings           |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Installation                  | 3.1       | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Wiring Diagrams               | 2.6       | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Layouts                       | 3.1.1     | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data            |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Operable Partitions           | 1.2       | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-04 Samples                 |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Operable Partitions           | 1.2       | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports            |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Acoustical Test               | 3.2.3     | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Flame and Smoke Development   | 2.7.1     | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Tests                         |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates            |           |                                 |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Materials                     | 2.1       | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Operable Partitions           | 1.2       | G RO                            |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |

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|   |                   |              |                                      |                    |  | SUBMIT                        | APPROVAL<br>NEEDED<br>BY | MATERIAL<br>NEEDED<br>BY | ACTION<br>CODE       | DATE<br>OF<br>ACTION |  | DATE FWD<br>TO OTHER<br>REVIEWER | DATE RCD<br>FROM OTH<br>REVIEWER | ACTION<br>CODE | DATE<br>OF<br>ACTION |  |         |
| (a)                                       | (b)               | (c)          | (d)                                  | (e)                | (f)                                    | (g)                           | (h)                      | (i)                      | (j)                  | (k)                  | (l)  | (m)                              | (n)                              | (o)            | (p)                  | (q)  | (r)     |
|   |                   | 10650        | SD-10 Operation and Maintenance Data |                    |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Operable Partitions                  | 1.2                |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   | 10800        | SD-03 Product Data                   |                    |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Finishes                             | 2.1.2              |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Accessory Items                      | 2.2                |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                   |                    |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Accessory Items                      | 2.2                |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   | 11035        | SD-02 Shop Drawings                  |                    |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Installation                         | 3.3                | G RO                                   |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data                   |                    |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Bullet Resistant Components          | 1.4                |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                   |                    |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Bullet Resistant Components          | 1.4                |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-10 Operation and Maintenance Data |                    |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Bullet Resistant Components          | 1.4                | G RO                                   |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   | 13100A       | SD-02 Shop Drawings                  |                    |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Detail Drawings                      | 1.3.3              |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                   |                    |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Materials                            | 2.1                |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   | 13120        | SD-02 Shop Drawings                  |                    |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Preengineered Building anchorage     | 1.4.2.1<br>1.4.2.1 | G RO                                   |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data                   |                    |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | materials                            | 2.1                |  |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |

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| (a)                                       | (b)               | (c)          | (d)                                     | (e)       | (f)                                      | (g)                           | (h)                      | (i)                      | (j)                  | (k)                  | (l)   | (m)                              | (n)                              | (o)            | (p)                  | (q)  | (r)     |
|   |                   | 13120        | Instruction Manuals                     | 1.4.4.1   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Erection                                | 1.4.4.2   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Qualifications                          | 1.4.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-04 Samples                           |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Factory color finish                    | 1.4.5.1   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Accessories                             | 1.4.5.2   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Roofing and Siding                      | 1.4.5.3   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Fasteners                               | 1.4.5.4   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Insulation                              | 1.4.5.5   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Gaskets and Insulating<br>Compounds     | 1.4.5.6   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Sealant                                 | 1.4.5.7   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Wall Liners                             | 1.4.5.9   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-05 Design Data                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Building                                | 1.4.2.2   | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Foundation loads                        | 1.2.1.4   | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | anchor bolts                            | 1.4.2.2   | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Purlins and girts                       | 2.1.1     | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Bracing                                 | 2.1.1     | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports                      |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Factory Color Finish                    | 1.4.5.1   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Insulation                              | 1.4.5.5   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                      |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | materials                               | 2.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-10 Operation and Maintenance<br>Data |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |



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|   |                   | 13120        | Preengineered Building           | 1.4.2.1   | G RO                                  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 15080        | SD-02 Shop Drawings              |           |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Mica Plates                      | 3.2.2.4   |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data               |           |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | General Materials                | 2.1       |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Adhesives                        | 2.1.1     |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Sealants                         | 2.1.13    |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Duct Insulation                  | 2.3.1     |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Duct Insulation Jackets          | 2.3.4     |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Pipe Insulation Materials        | 2.2       |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Jackets                          | 2.1.8     |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 15182        | SD-03 Product Data               |           |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Refrigerant Piping System        | 2.3       |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 15400        | SD-02 Shop Drawings              |           |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Plumbing System                  |           | G RO                                  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data               |           |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Waterless closets                |           |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Waterless urinals                |           |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Welding                          | 1.6.1     |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Vibration-Absorbing Features     | 3.4       | G RO                                  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Plumbing System                  |           |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports               |           |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Tests, Flushing and Disinfection | 3.9       |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates               |           |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Materials and Equipment          | 1.3       |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Bolts                            |           |                                       |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |

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|   |                   | 15400        | SD-10 Operation and Maintenance Data      |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Plumbing System                           |           | G RO                                     |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 15700A       | SD-02 Shop Drawings                       |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Drawings                                  | 1.5.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data                        |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Materials and Equipment                   | 2.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports                        |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Refrigerant Tests, Charging, and Start-Up | 3.3       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | System Performance Tests                  | 3.4       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                        |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Materials and Equipment                   | 2.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Service Organization                      | 2.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-10 Operation and Maintenance Data      |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Operation and Maintenance Manuals         |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 15895        | SD-03 Product Data                        |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Components and Equipment                  | 2.1       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Diffusers                                 |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Registers and Grilles                     | 2.6.5.5   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Louvers                                   | 2.6.6     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | In-Line Centrifugal Fans                  |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Panel Type Power Wall Ventilators         | 2.7.1.4   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |

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|   |                   | 15895        | Centrifugal Type Power Roof Ventilators | 2.7.1.6   |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Ceiling Exhaust Fans                    | 2.7.1.9   |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | SD-10 Operation and Maintenance Data    |           |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Operation and Maintenance Manuals       |           |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Panel Type Power Wall Ventilators       | 2.7.1.4   |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Centrifugal Type Power Roof Ventilators | 2.7.1.6   |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   | 15990A       | SD-03 Product Data                      |           |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | TAB Related HVAC Submittals             | 3.2       |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | TAB Procedures                          | 3.5.1     |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Calibration                             | 1.4       |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Systems Readiness Check                 | 3.5.2     |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | TAB Execution                           | 3.5.1     |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | SD-06 Test Reports                      |           |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Design Review Report                    | 3.1       |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Systems Readiness Check                 | 3.5.2     |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | TAB Report                              | 3.5.3     |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | SD-07 Certificates                      |           |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | TAB Firm                                | 1.5.1     |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | TAB Specialist                          | 1.5.2     |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   | 15995A       | SD-03 Product Data                      |           |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |
|   |                   |              | Commissioning Team                      | 3.1       |                                 |                               |                          |                          |                      |                      |     |   |                                  |                                  |                |  |         |

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|   |                   | 15995A       | Tests                          | 3.2       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Pre-Commissioning Checks       | 3.2.1     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports             |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Test Reports                   | 3.2       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 16070A       | SD-02 Shop Drawings            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Lighting Fixtures in Buildings | 3.2       |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Equipment Requirements         |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data             |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Lighting Fixtures in Buildings | 3.2       | G RE                                   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Equipment Requirements         |           | G RE                                   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Contractor Designed Bracing    | 1.3.4     | G RE                                   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 16375A       | SD-02 Shop Drawings            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Detail Drawings                |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | As-Built Drawings              | 1.6.2     |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports             |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Cable Installation             | 3.2.1.4   |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates             |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Installation Engineer          |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 16402        | SD-02 Shop Drawings            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Panelboards                    | 2.15      | G RE                                   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Cable trays                    | 2.5       | G RE                                   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data             |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Receptacles                    | 2.14      | G RE                                   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Circuit breakers               | 2.15.3    | G RE                                   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Switches                       | 2.12      | G RE                                   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Manual motor starters          | 2.23      | G RE                                   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |

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|   |                   | 16402        | Grounding Busbar                | 2.28.3    | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Surge protective devices        | 2.37      | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports              |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | 600-volt wiring test            | 3.5.2     | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Grounding system test           | 3.5.5     | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Ground-fault receptacle test    | 3.5.4     | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-10 Operation and Maintenance |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Data                            |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Electrical Systems              | 1.5.1     | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   | 16510        | SD-03 Product Data              |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Fluorescent lighting fixtures   | 2.1       | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Fluorescent electronic ballasts | 1.6.1     | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Fluorescent lamps               | 2.1.6     | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | High-intensity-discharge (HID)  |           | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | lighting fixtures               |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | HID ballasts                    |           | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | High-pressure sodium (HPS)      |           | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | lamps                           |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Metal-halide lamps              |           | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Lighting contactor              | 2.8       | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Power hook fixture hangers      |           | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Exit signs                      | 2.12      | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Emergency lighting equipment    | 2.13      | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-04 Samples                   |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   |              | Lighting fixtures               |           | G RE                            |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |
|   |                   | 16710        | SD-02 Shop Drawings             |           |                                 |                               |                          |                          |                      |                      |  |                                  |                                  |                |                      |  |         |

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|---|-------------------|--------------|---------------------------------|-----------|---|-------------------------------|--------------------------|--------------------------|----------------------|----------------------|---|----------------------------------|----------------------------------|----------------|----------------------|--|---------|
| TITLE AND LOCATION<br>UAC and Shoot House |                   |              |                                 |           |   | CONTRACTOR                    |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
| ACTIVITY<br>NO                            | TRANSMITTAL<br>NO | SPEC<br>SECT | DESCRIPTION<br>ITEM SUBMITTED   | PARAGRAPH | GOVT<br>CLASS<br>SIFIC<br>ATION<br>OR<br>A/E<br>REV<br>WR | CONTRACTOR:<br>SCHEDULE DATES |                          |                          | CONTRACTOR<br>ACTION |                      | DATE FWD<br>TO APPR<br>AUTH/<br><br>DATE RCD<br>FROM<br>CONTR | APPROVING AUTHORITY              |                                  |                |                      | MAILED<br>TO<br>CONTR/<br><br>DATE RCD<br>FRM APPR<br>AUTH | REMARKS |
|   |                   |              |                                 |           |   | SUBMIT                        | APPROVAL<br>NEEDED<br>BY | MATERIAL<br>NEEDED<br>BY | ACTION<br>CODE       | DATE<br>OF<br>ACTION |   | DATE FWD<br>TO OTHER<br>REVIEWER | DATE RCD<br>FROM OTH<br>REVIEWER | ACTION<br>CODE | DATE<br>OF<br>ACTION |  |         |
| (a)                                       | (b)               | (c)          | (d)                             | (e)       | (f)   | (g)                           | (h)                      | (i)                      | (j)                  | (k)                  | (l)   | (m)                              | (n)                              | (o)            | (p)                  | (q)  | (r)     |
|   |                   | 16710        | Telecommunications drawings     | 1.6.1.1   | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Telecommunications Space        | 1.6.1.2   | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Drawings                        |           |   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data              |           |   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Telecommunications cabling      | 2.3       | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Patch panels                    | 2.4.5     | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Telecommunications              | 2.5       | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | outlet/connector assemblies     |           |   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Equipment support frame         | 2.4.2     | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Target Data Panel/Remote        |           | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Communications Enclosures       |           |   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Spare Parts                     | 1.10.3    | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports              |           |   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Telecommunications cabling      | 3.5.1     | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | testing                         |           |   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates              |           |   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Telecommunications Contractor   | 1.6.2.1   | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Key Personnel                   | 1.6.2.2   | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Manufacturer Qualifications     | 1.6.2.3   | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Test plan                       | 1.6.3     | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-09 Manufacturer's Field      |           |   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Reports                         |           |   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Factory reel tests              | 2.13.1    | G RE  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-10 Operation and Maintenance |           |   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Data                            |           |   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |

## SUBMITTAL REGISTER

CONTRACT NO.

| TITLE AND LOCATION<br>UAC and Shoot House |                   |              |   |           |  | CONTRACTOR                    |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|---|-------------------|--------------|---|-----------|--|-------------------------------|--------------------------|--------------------------|----------------------|----------------------|---|----------------------------------|----------------------------------|----------------|----------------------|--|---------|
| ACTIVITY<br>NO                            | TRANSMITTAL<br>NO | SPEC<br>SECT | DESCRIPTION<br>ITEM SUBMITTED                 | PARAGRAPH | GOVT<br>CLASS<br>SIFIC<br>ATION<br>REV<br>WR | CONTRACTOR:<br>SCHEDULE DATES |                          |                          | CONTRACTOR<br>ACTION |                      | DATE FWD<br>TO APPR<br>AUTH/<br><br>DATE RCD<br>FROM<br>CONTR | APPROVING AUTHORITY              |                                  |                |                      | MAILED<br>TO<br>CONTR/<br><br>DATE RCD<br>FRM APPR<br>AUTH | REMARKS |
|   |                   |              |   |           |  | SUBMIT                        | APPROVAL<br>NEEDED<br>BY | MATERIAL<br>NEEDED<br>BY | ACTION<br>CODE       | DATE<br>OF<br>ACTION |   | DATE FWD<br>TO OTHER<br>REVIEWER | DATE RCD<br>FROM OTH<br>REVIEWER | ACTION<br>CODE | DATE<br>OF<br>ACTION |  |         |
| (a)                                       | (b)               | (c)          | (d)   | (e)       | (f)  | (g)                           | (h)                      | (i)                      | (j)                  | (k)                  | (l)   | (m)                              | (n)                              | (o)            | (p)                  | (q)  | (r)     |
|   |                   | 16710        | Telecommunications cabling and pathway system | 1.10.1    | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-11 Closeout Submittals                     |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Record Documentation                          | 1.10.2    | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   | 16711        | SD-02 Shop Drawings                           |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Telecommunications Outside Plant              | 1.6.1.1   | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Telecommunications Entrance Facility Drawings |           | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-03 Product Data                            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Wire and cable                                | 2.8       | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Spare Parts                                   | 1.8.2     | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-06 Test Reports                            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Pre-installation tests                        | 3.5.1     | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Acceptance tests                              | 3.5.2     | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Outside Plant Test Plan                       | 1.6.3     | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-07 Certificates                            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Telecommunications Contractor                 | 1.6.2.1   | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Key Personnel                                 | 1.6.2.2   | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Manufacturer's Qualifications                 | 1.6.2.3   | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-08 Manufacturer's Instructions             |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Cable tensions                                | 3.1.8.1   | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Fiber Optic Splices                           |           | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | SD-09 Manufacturer's Field Reports            |           |  |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |
|   |                   |              | Factory Reel Test Data                        | 2.16.1    | G RE   |                               |                          |                          |                      |                      |   |                                  |                                  |                |                      |  |         |

|   |                     |
|---|---------------------|
| <p align="center"><b>SUBMITTAL REGISTER</b></p> | <p>CONTRACT NO.</p> |
|---|---------------------|

|              |
|--------------|
| CONTRACT NO. |
|--------------|

| ACTIVITY<br>NO | TRANSMITTAL<br>NO | SPEC<br>SECT | DESCRIPTION<br>ITEM SUBMITTED | PARAGRAPH<br># | GOVT<br>OR<br>CLASS<br>SPEC<br>ATTION | REVIEW |
|----------------|-------------------|--------------|-------------------------------|----------------|---------------------------------------|--------|
|----------------|-------------------|--------------|-------------------------------|----------------|---------------------------------------|--------|

| CONTRACTOR:<br>SCHEDULE DATES |                          |                          | CONTRACTOR<br>ACTION                               |                      |   | APPROVING AUTHORITY              |                                  |  |                      |  |  |
|-------------------------------|--------------------------|--------------------------|--|----------------------|---|----------------------------------|----------------------------------|--|----------------------|--|--|
| SUBMIT                        | APPROVAL<br>NEEDED<br>BY | MATERIAL<br>NEEDED<br>BY | A<br>C<br>T<br>I<br>O<br>N<br><br>C<br>O<br>D<br>E | DATE<br>OF<br>ACTION | DATE FWD<br>TO APPR<br>AUTH/<br><br>DATE RCD<br>FROM<br>CONTR | DATE FWD<br>TO OTHER<br>REVIEWER | DATE RCD<br>FROM OTH<br>REVIEWER | A<br>C<br>T<br>I<br>O<br>N<br><br>C<br>O<br>D<br>E | DATE<br>OF<br>ACTION |  |  |

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01335

SUSTAINABLE DESIGN AND DEVELOPMENT

**09/04**

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## SECTION 01335

## SUSTAINABLE DESIGN AND DEVELOPMENT

09/04

## PART 1 GENERAL

## 1.1 DESCRIPTION

This project has been designed for, and shall be developed to incorporate sustainable design measures where reasonably practicable in general accordance with SPiRiT 1.4.1. Table 1 and Table 2 identify the SPiRiT elements that are designed into or otherwise required for this project. No variations or substitutions to the SPiRiT elements identified for this contract shall be allowed without written consent from the Contracting Officer. Should there be a case where there is any problem meeting the targeted elements of a SPiRiT LEED credit identified for this project in Table 1 or Table 2, the Contractor must bring this to the attention of the Contracting Officer immediately.

The Contractor shall provide and assemble under separate cover documentation verifying compliance with SPiRiT requirements as listed in this specification and as otherwise identified within the Technical Specifications. Some SPiRiT credits are inherent in the design provided and require no further submittal or documentation. For these credits, the Contractor shall familiarize himself with the project features that relate to them so that no action contrary to the design intent is inadvertently taken during construction. Some SPiRiT credits involve material selection and are generally identified within the Technical Specification with the notation "SDD", though not specifically identified in all occurrences. Some SPiRiT credits are dependent on construction practices.

All SPiRiT credits identified in Table 1 and Table 2 under the columns "Material Selection" and "Construction Practices" shall be documented by the Contractor. Table 1 and Table 2 provide a general summary of types of action, submittals required and specification references. Detailed documentation on submittal requirements is contained in the Technical Specifications and paragraph 1.4 below. Some of the SPiRiT points may have common traits between items inherent in the design and those involving material selection or construction practices. In this case, the Contractor shall only document those items pertaining to material selection or construction practices.

In all cases where a material, product or execution requirement is identified as a sustainable feature ("SDD") elsewhere in the contract documents, additional data or certificates shall be submitted with the individual component or process validating the material or component to the respective SPiRiT credit item. This additional data or certificates shall be separable from the other submitted data and a copy shall be included in the SPiRiT Documentation Notebook in addition to the distribution indicated in the submittal register.

## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

### SD-01 Preconstruction Submittals

#### SPiRiT Compliance Plan

A detailed plan identifying all construction practices, procurement data or cumulative calculations of components required for SPiRiT credit that must be identified and tracked during the course of construction. Plan shall indicate the SPiRiT credit being tracked or documented, individual components of the SPiRiT credit related items, dates of submittal of individual components of the SPiRiT credit related items, and proposed method of tracking in accordance with SPiRiT 1.4.1 and the LEED Reference Guide.

### SD-05 Design Data

#### SPiRiTLEED Calculations

Calculations showing compliance with a required SPiRiTLEED credit where identified in Table 1 and Table 2 or within the SPiRiT Compliance Plan. Calculations shall be current and available for review monthly. Final calculations should be included in the SPiRiT Documentation Notebook under the appropriate tab.

### SD-11 Closeout Submittals

#### SPiRiT Documentation Notebook; DO

The Contractor shall prepare a Documentation Notebook documenting compliance for each SPiRiT element identified in Table 1 and Table 2. Notebook shall include product data for material selection where "SDD" is indicated, final calculations, certifications for construction practices, procurement data, cumulative calculations of components of materials throughout the project, and other items as identified in the SPiRiT Compliance Plan. Notebook must contain all required data to show measures incorporated for the indicated SPiRiT credit. SPiRiT credits that are indicated as inherent to the design will be documented by the designer of record.

SPiRiT Documentation Notebooks shall be formatted to match SPiRiT numbering system and tabbed for each point. Notebooks shall be kept current on a weekly basis and at least one set shall be available on the jobsite at all times. If the Contractor fails to maintain the SPiRiT Documentation Notebooks as specified herein, the Contracting Officer will deduct from the monthly progress payment an amount representing the estimated cost of maintaining these Notebooks. This monthly deduction will continue until an agreement can be reached between the Contracting Officer and the Contractor regarding the accuracy and completeness of the Notebooks.

The original and one copy of each notebook shall be submitted at project closeout.

### 1.3 DOCUMENTATION REQUIREMENTS

SPiRiT credits as identified in Table 1 and Table 2 shall be incorporated and documented as required by the Technical Specifications and in general accordance with the SPiRiT 1.4.1 and the LEED Reference Guide. SPiRiT Credits not identified elsewhere in the Technical Specifications, or those requiring further instruction are listed below.

#### 1.3.1 SPiRiT credit 1.C5 Reduced Site Disturbance

Limits of disturbance and/or site restoration requirements are identified in the Contract Documents. The Contractor shall identify in his SPiRiT Compliance Plan controls that will be put in place to ensure compliance with the identified limits.

#### 1.3.2 SPiRiT credit 4.C2 Construction Waste Management

Notwithstanding the requirements of Section 01572 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT, the Contractor shall include in his SPiRiT Compliance Plan a waste management plan that complies with the requirements of SPiRiT credit 4.C2 Construction Waste Management to the point level listed in Table 1 and Table 2 for recycling and/or salvage of at least 50 percent (by weight) of construction, demolition and land clearing waste. The plan should include proposed worksheets for tracking the value used and record keeping requirements for documentation to validate the final value. Refer to SPiRiT 1.4.1, Sustainable Rating Tool and the LEED Reference Guide for definitions and requirements. For this credit performance is measured for the entire project and is not measured separately for each facility/facility type.

#### 1.3.3 SPiRiT credit 4.C4 Recycled Content

Notwithstanding the requirements of Section 01670 RECYCLED/RECOVERED MATERIALS promoting the use of recycled or recovered materials, the Contractor shall include in his SPiRiT Compliance Plan a method of tracking, record keeping and validation that building materials containing post-consumer and/or post-industrial recycled content were used to the extent reasonably practicable. The plan should include proposed worksheets for tracking the value used and record keeping requirements for documentation to validate the final value. Recycled content worksheet at [http://en.sas.usace.army.mil/ae/spreadsheet/4\\_C4%20Recycle%20Content%20Worksheet.xls](http://en.sas.usace.army.mil/ae/spreadsheet/4_C4%20Recycle%20Content%20Worksheet.xls) may be used. Refer to the SPiRiT 1.4.1 and the LEED Reference Guide for definitions, exclusions and requirements. For this point performance is measured for the entire project and is not measured separately for each facility/facility type.

#### 1.3.4 SPiRiT credit 4.C5 Local/Regional Materials

The Contractor shall include in his SPiRiT Compliance Plan a method of tracking, record keeping and validation that, where practicable, building products are manufactured regionally within a radius of 500 miles from the project site. These regionally manufactured materials shall also be extracted, harvested or recovered within 500 miles of the job site where reasonably practicable. The plan should include proposed worksheets for tracking the value used and record keeping requirements for documentation

to validate the final value. Regional Material worksheet at <http://en.sas.usace.army.mil> "Engineering Criteria" may be used. Refer to the SPiRiT 1.4.1 and the LEED Reference Guide for definitions, exclusions and requirements. For this point performance is measured for the entire project and is not measured separately for each facility/facility type.

#### 1.3.5 SPiRiT credit 4.C7 Certified Wood

The Contractor shall include in his SPiRiT Compliance Plan a method of tracking, record keeping and validation that, to the extent reasonably practicable, wood-based materials are certified in accordance with the Forest Stewardship Council guidelines for wood building components including but not limited to framing, flooring, finishes, furnishings, and non-rented temporary construction applications such as bracing, concrete form work and pedestrian barriers. Refer to the SPiRiT 1.4.1 and the LEED Reference Guide for definitions and requirements.

#### 1.3.6 SPiRiT credit 5.C3 Construction IAQ Management Plan

The Contractor shall included in his SPiRiT Compliance Plan a Construction Indoor Air Quality (IAQ) Management Plan for the construction and pre-occupancy phases of the building that, during construction, meets or exceeds the minimum requirements of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guideline for Occupied Buildings under Construction, 1995, AND protects stored on-site or installed absorptive materials from moisture damage, AND replaces all filtration media immediately prior to occupancy. Refer to the SPiRiT 1.4.1 and the LEED Reference Guide for definitions and requirements.

### PART 2 PRODUCTS (NOT USED)

### PART 3 EXECUTION

#### 3.1 GENERAL

SPiRiT elements as identified in Table 1 and Table 2 below are targeted to be incorporated, to the extent reasonably practicable, in general compliance with the SPiRiT 1.4.1 and the LEED Reference Guide. Although some targeted points may not be fully achievable, the attempt to incorporate sustainable design elements to the extent reasonably practicable must be documented.

-- End of Section --

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## DIVISION 01 - GENERAL REQUIREMENTS

## SECTION 01355A

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02/02

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SECTION 01355A  
ENVIRONMENTAL PROTECTION  
**02/02**

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY (DA)

AR 200-5 (1999) Pest Management

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2003) Safety -- Safety and Health Requirements

WETLAND MANUAL Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

33 CFR 328 Definitions of Waters of the United States

40 CFR 152 - 186 Pesticide Programs

40 CFR 260 Hazardous Waste Management System: General

40 CFR 261 Identification and Listing of Hazardous Waste

40 CFR 262 Standards Applicable to Generators of Hazardous Waste

40 CFR 279 Standards for the Management of Used Oil

40 CFR 302 Designation, Reportable Quantities, and Notification

40 CFR 355 Emergency Planning and Notification

40 CFR 68 Chemical Accident Prevention Provisions

49 CFR 171 - 178 Hazardous Materials Regulations

1.2 DEFINITIONS

1.2.1 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical,



or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

#### 1.2.2 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

#### 1.2.3 Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

#### 1.2.4 Installation Pest Management Coordinator

Installation Pest Management Coordinator (IPMC) is the individual officially designated by the Installation Commander to oversee the Installation Pest Management Program and the Installation Pest Management Plan.

#### 1.2.4 Project Pesticide Coordinator

The Project Pesticide Coordinator (PPC) is an individual that resides at a Civil Works Project office and that is responsible for oversight of pesticide application on Project grounds.

#### 1.2.5 Land Application for Discharge Water

The term "Land Application" for discharge water implies that the Contractor shall discharge water at a rate which allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" shall occur. Land Application shall be in compliance with all applicable Federal, State, and local laws and regulations.

#### 1.2.6 Pesticide

Pesticide is defined as any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant or desiccant.

#### 1.2.7 Pests

The term "pests" means arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds and other organisms (except for human or animal disease-causing organisms) that

adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

#### 1.2.8 Surface Discharge

The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, and/or "waters of the United States" and would require a permit to discharge water from the governing agency.

#### 1.2.9 Waters of the United States

All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

#### 1.2.10 Wetlands

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs. Official determination of whether or not an area is classified as a wetland must be done in accordance with WETLAND MANUAL.

### 1.3 GENERAL REQUIREMENTS

The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. The Contractor shall comply with all applicable environmental Federal, State, and local laws and regulations. The Contractor shall be responsible for any delays resulting from failure to comply with environmental laws and regulations.

#### 1.4 SUBCONTRACTORS

The Contractor shall ensure compliance with this section by subcontractors.

#### 1.5 PAYMENT

No separate payment will be made for work covered under this section. The Contractor shall be responsible for payment of fees associated with environmental permits, application, and/or notices obtained by the Contractor. All costs associated with this section shall be included in the contract price. The Contractor shall be responsible for payment of all fines/fees for violation or non-compliance with Federal, State, Regional and local laws and regulations.

#### 1.6 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

## SD-01 Preconstruction Submittals

## Environmental Protection PlanG, PO

The environmental protection plan.

## 1.7 ENVIRONMENTAL PROTECTION PLAN

Prior to commencing construction activities or delivery of materials to the site, the Contractor shall submit an Environmental Protection Plan for review and approval by the Contracting Officer. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during construction. Issues of concern shall be defined within the Environmental Protection Plan as outlined in this section. The Contractor shall address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Topics or issues which are not identified in this section, but which the Contractor considers necessary, shall be identified and discussed after those items formally identified in this section. Prior to submittal of the Environmental Protection Plan, the Contractor shall meet with the Contracting Officer for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the Contractor's Environmental Plans. The Environmental Protection Plan shall be current and maintained onsite by the Contractor.

## 1.7.1 Compliance

No requirement in this Section shall be construed as relieving the Contractor of any applicable Federal, State, and local environmental protection laws and regulations. During Construction, the Contractor shall be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

## 1.7.2 Contents

The environmental protection plan shall include, but shall not be limited to, the following:

- a. Name(s) of person(s) within the Contractor's organization who is(are) responsible for ensuring adherence to the Environmental Protection Plan.
- b. Name(s) and qualifications of person(s) responsible for manifesting hazardous waste to be removed from the site, if applicable.
- c. Name(s) and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.
- d. Description of the Contractor's environmental protection personnel training program.
- e. An erosion and sediment control plan which identifies the type and location of the erosion and sediment controls to be provided. The plan shall include monitoring and reporting requirements to assure that the control measures are in compliance with the erosion and sediment

control plan, Federal, State, and local laws and regulations. A Storm Water Pollution Prevention Plan (SWPPP) may be substituted for this plan.

f. Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on the site.

g. Traffic control plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. Plan shall include measures to minimize the amount of mud transported onto paved public roads by vehicles or runoff.

h. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.

i. Drawing showing the location of borrow areas.

j. The Spill Control plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations. The Spill Control Plan supplements the requirements of EM 385-1-1 and the Fort Stewart Spill Control and Countermeasure Plan, available at the Environmental Office. This plan shall include as a minimum:

1. The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Contracting Officer and Facility Response Personnel in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.

2. The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.

3. Training requirements for Contractor's personnel and methods of accomplishing the training.

4. A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.

5. The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.

6. The methods and procedures to be used for expeditious contaminant cleanup.

k. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris. The plan shall include schedules for disposal. The Contractor shall identify any subcontractors responsible for the transportation and disposal of solid waste. Licenses or permits shall be submitted for solid waste disposal sites that are not a commercial operating facility. Evidence of the disposal facility's acceptance of the solid waste shall be attached to this plan during the construction. The Contractor shall attach a copy of each of the Non-hazardous Solid Waste Diversion Reports to the disposal plan. The report shall be submitted on the first working day after the first quarter that non-hazardous solid waste has been disposed and/or diverted and shall be for the previous quarter (e.g. the first working day of January, April, July, and October). The report shall indicate the total amount of waste generated and total amount of waste diverted in cubic yards or tons along with the percent that was diverted.

l. A recycling and solid waste minimization plan with a list of measures to reduce consumption of energy and natural resources. The plan shall detail the Contractor's actions to comply with and to participate in Federal, State, Regional, and local government sponsored recycling programs to reduce the volume of solid waste at the source.

m. An air pollution control plan detailing provisions to assure that dust, debris, materials, trash, etc., do not become air borne and travel off the project site.

n. A contaminant prevention plan that: identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these materials. In accordance with EM 385-1-1, a copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be on site at any given time shall be included in the contaminant prevention plan. As new hazardous materials are brought on site or removed from the site, the plan shall be updated.

o. A waste water management plan that identifies the methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines. If a settling/retention pond is required, the plan shall include the design of the pond including drawings, removal plan, and testing requirements for possible pollutants. If land application will be the method of disposal for the waste water, the plan shall include a sketch showing the location for land application along with a description of the pretreatment methods to be implemented. If surface discharge will be the method of disposal, a copy of the permit and associated documents shall be included as an attachment prior to discharging the waste water. If disposal is to a sanitary sewer, the plan shall include documentation that the Waste Water Treatment Plant Operator has approved the flow rate, volume, and type of discharge.

p. A historical, archaeological, cultural resources biological resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands known to be on the project site: and/or

identifies procedures to be followed if historical archaeological, cultural resources, biological resources and wetlands not previously known to be onsite or in the area are discovered during construction. The plan shall include methods to assure the protection of known or discovered resources and shall identify lines of communication between Contractor personnel and the Contracting Officer.

q. A pesticide treatment plan shall be included and updated, as information becomes available. The plan shall include: sequence of treatment, dates, times, locations, pesticide trade name, EPA registration numbers, authorized uses, chemical composition, formulation, original and applied concentration, application rates of active ingredient (i.e. pounds of active ingredient applied), equipment used for application and calibration of equipment. The Contractor is responsible for Federal, State, Regional and Local pest management record keeping and reporting requirements as well as any additional Installation specific requirements. The Contractor shall follow AR 200-5 Pest Management, Chapter 2, Section III "Pest Management Records and Reports" for data required to be reported to the Installation.

#### 1.7.3 Appendix

Copies of all environmental permits, permit application packages, approvals to construct, notifications, certifications, reports, and termination documents shall be attached, as an appendix, to the Environmental Protection Plan.

#### 1.8 PROTECTION FEATURES

This paragraph supplements the Contract Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Prior to start of any onsite construction activities, the Contractor and the Contracting Officer shall make a joint condition survey. Immediately following the survey, the Contractor shall prepare a brief report including a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of trees, shrubs and grassed areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. This survey report shall be signed by both the Contractor and the Contracting Officer upon mutual agreement as to its accuracy and completeness. The Contractor shall protect those environmental features included in the survey report and any indicated on the drawings, regardless of interference which their preservation may cause to the Contractor's work under the contract.

#### 1.9 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to approval by the Contracting Officer and may require an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

#### 1.10 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any

observed noncompliance with Federal, State or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

## PART 2 PRODUCTS (NOT USED)

## PART 3 EXECUTION

### 3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS

The Contractor shall be responsible for obtaining and complying with all environmental permits and commitments required by Federal, State, Regional, and local environmental laws and regulations.

### 3.2 LAND RESOURCES

The Contractor shall confine all activities to areas defined by the drawings and specifications. Prior to the beginning of any construction, the Contractor shall identify any land resources to be preserved within the work area. Except in areas indicated on the drawings or specified to be cleared, the Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without approval. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. The Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs. Stone, soil, or other materials displaced into uncleared areas shall be removed by the Contractor.

#### 3.2.1 Work Area Limits

Prior to commencing construction activities, the Contractor shall mark the areas that need not be disturbed under this contract. Isolated areas within the general work area which are not to be disturbed shall be marked or fenced. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, any markers shall be visible in the dark. The Contractor's personnel shall be knowledgeable of the purpose for marking and/or protecting particular objects.

#### 3.2.2 Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the drawings to be preserved shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques. The Contractor shall restore landscape features damaged or destroyed during construction operations outside the limits of the approved work area.

### 3.2.3 Erosion and Sediment Controls

The Contractor shall be responsible for providing erosion and sediment control measures in accordance with Federal, State, and local laws and regulations. The erosion and sediment controls selected and maintained by the Contractor shall be such that water quality standards are not violated as a result of the Contractor's construction activities. The area of bare soil exposed at any one time by construction operations should be kept to a minimum. The Contractor shall construct or install temporary and permanent erosion and sediment control best management practices (BMPs) as indicated on the drawings. BMPs may include, but not be limited to, vegetation cover, stream bank stabilization, slope stabilization, silt fences, construction of terraces, interceptor channels, sediment traps, inlet and outfall protection, diversion channels, and sedimentation basins. The Contractor's best management practices shall also be in accordance with the Fort Stewart National Pollutant Discharge Elimination System (NPDES) Storm Water Pollution Prevention Plan (SWPPP) which may be reviewed at the Fort Stewart Environmental Office. Any temporary measures shall be removed after the area has been stabilized.

### 3.2.4 Contractor Facilities and Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only when approved. Erosion and sediment controls shall be provided for on-site borrow and spoil areas to prevent sediment from entering nearby waters. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas.

## 3.3 WATER RESOURCES

The Contractor shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation unless otherwise indicated. All water areas affected by construction activities shall be monitored by the Contractor. For construction activities immediately adjacent to impaired surface waters, the Contractor shall be capable of quantifying sediment or pollutant loading to that surface water when required by State or Federally issued Clean Water Act permits.

### 3.3.1 Wetlands

The Contractor shall not enter, disturb, destroy, or allow discharge of contaminants into any wetlands except as authorized herein. The Contractor shall be responsible for the protection of wetlands shown on the drawings in accordance with paragraph ENVIRONMENTAL PERMITS, REVIEWS, AND APPROVALS.

Authorization to enter specific wetlands identified shall not relieve the Contractor from any obligation to protect other wetlands within, adjacent to, or in the vicinity of the construction site and associated boundaries.

## 3.4 AIR RESOURCES

Equipment operation, activities, or processes performed by the Contractor shall be in accordance with all Federal and State air emission and performance laws and standards.



#### 3.4.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials, such as from asphaltic batch plants; shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp at all times. The Contractor must have sufficient, competent equipment available to accomplish these tasks. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs. The Contractor shall comply with all State and local visibility regulations.

#### 3.4.2 Odors

Odors from construction activities shall be controlled at all times. The odors shall not cause a health hazard and shall be in compliance with State regulations and/or local ordinances.

#### 3.4.3 Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize environment damage by noise. The Contractor shall comply with the provisions of the State of Georgia rules.

#### 3.4.4 Burning

Burning shall be prohibited on the Government premises.

### 3.5 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

Disposal of wastes shall be as directed below, unless otherwise specified in other sections and/or shown on the drawings.

#### 3.5.1 Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. Handling, storage, and disposal shall be conducted to prevent contamination. Segregation measures shall be employed so that no hazardous or toxic waste will become co-mingled with solid waste. The Contractor shall transport solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. A Subtitle D RCRA permitted landfill shall be the minimum acceptable off-site solid waste disposal option. The Contractor shall verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate.

#### 3.5.2 Chemicals and Chemical Wastes

Chemicals shall be dispensed ensuring no spillage to the ground or water. Periodic inspections of dispensing areas to identify leakage and initiate corrective action shall be performed and documented. This documentation

will be periodically reviewed by the Government. Chemical waste shall be collected in corrosion resistant, compatible containers. Collection drums shall be monitored and removed to a staging or storage area when contents are within 6 inches of the top. Wastes shall be classified, managed, stored, and disposed of in accordance with Federal, State, and local laws and regulations.

### 3.5.3 Contractor Generated Hazardous Wastes/Excess Hazardous Materials

Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in 49 CFR 171 - 178. The Contractor shall, at a minimum, manage and store hazardous waste in compliance with 40 CFR 262 and shall manage and store hazardous waste in accordance with the Installation hazardous waste management plan. The Contractor shall take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing. The Contractor shall segregate hazardous waste from other materials and wastes, shall protect it from the weather by placing it in a safe covered location, and shall take precautionary measures such as berming or other appropriate measures against accidental spillage. The Contractor shall be responsible for storage, describing, packaging, labeling, marking, and placarding of hazardous waste and hazardous material in accordance with 49 CFR 171 - 178, State, and local laws and regulations. The Contractor shall transport Contractor generated hazardous waste off Government property within 60 days in accordance with the Environmental Protection Agency and the Department of Transportation laws and regulations. The Contractor shall dispose of hazardous waste in compliance with Federal, State and local laws and regulations. Spills of hazardous or toxic materials shall be immediately reported to the Contracting Officer and the Facility Environmental Office. Cleanup and cleanup costs due to spills shall be the Contractor's responsibility. The disposition of Contractor generated hazardous waste and excess hazardous materials are the Contractor's responsibility.

### 3.5.4 Fuel and Lubricants

Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Fuel, lubricants and oil shall be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations. There shall be no storage of fuel on the project site. Fuel must be brought to the project site each day that work is performed.

### 3.5.5 Waste Water

Disposal of waste water shall be as specified below.

- a. Waste water from construction activities, such as onsite material processing, concrete curing, foundation and concrete clean-up, water used in concrete trucks, forms, etc. shall not be allowed to enter water ways or to be discharged prior to being treated to remove pollutants. The Contractor shall dispose of the construction related waste water off-Government property in accordance with all Federal, State, Regional and Local laws and regulations.
- b. For discharge of ground water, the Contractor shall surface

discharge in accordance with all Federal, State, and local laws and regulations.

- c. Water generated from the flushing of lines after disinfection or disinfection in conjunction with hydrostatic testing shall be discharged into the sanitary sewer with prior approval and/or notification to the Waste Water Treatment Plant's Operator.

### 3.6 RECYCLING AND WASTE MINIMIZATION

The Contractor shall participate in State and local government sponsored recycling programs. The Contractor is further encouraged to minimize solid waste generation throughout the duration of the project. A minimum of 50% of solid waste, by weight must be reused, recycled, or otherwise diverted from disposal.

### 3.7 NON-HAZARDOUS SOLID WASTE DIVERSION REPORT

The Contractor shall maintain an inventory of non-hazardous solid waste diversion and disposal of construction and demolition debris. The Contractor shall submit a report to the Fort Stewart Environmental Office through the Contracting Officer on the first working day after each fiscal year quarter, starting the first quarter that non-hazardous solid waste has been generated. The following shall be included in the report:

- a. Construction and Demolition (C&D) Debris Disposed = \_\_\_\_\_ in cubic yards or tons, as appropriate.
- b. Construction and Demolition (C&D) Debris Recycled = \_\_\_\_\_ in cubic yards or tons, as appropriate.
- c. Total C&D Debris Generated = \_\_\_\_\_ in cubic yards or tons, as appropriate.
- d. Waste Sent to Waste-To-Energy Incineration Plant (This amount should not be included in the recycled amount) = \_\_\_\_\_ in cubic yards or tons, as appropriate.

### 3.8 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

If during excavation or other construction activities any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, all activities that may damage or alter such resources shall be temporarily suspended. Resources covered by this paragraph include but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, the Contractor shall immediately notify the Contracting Officer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. The Contractor shall cease all activities that may result in impact to or the destruction of these resources. The Contractor shall secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources.

### 3.9 BIOLOGICAL RESOURCES

The Contractor shall minimize interference with, disturbance to, and damage

to fish, wildlife, and plants including their habitat. The Contractor shall be responsible for the protection of threatened and endangered animal and plant species including their habitat in accordance with Federal, State, Regional, and local laws and regulations.

### 3.10 INTEGRATED PEST MANAGEMENT

In order to minimize impacts to existing fauna and flora, the Contractor, through the Contracting Officer, shall coordinate with the Installation Pest Management Coordinator (IPMC) at the earliest possible time prior to pesticide application. The Contractor shall discuss integrated pest management strategies with the IPMC and receive concurrence from the IPMC through the COR prior to the application of any pesticide associated with these specifications. Project Office Pest Management personnel shall be given the opportunity to be present at all meetings concerning treatment measures for pest or disease control and during application of the pesticide. The use and management of pesticides are regulated under 40 CFR 152 - 186.

#### 3.10.1 Pesticide Delivery and Storage

Pesticides shall be delivered to the site in the original, unopened containers bearing legible labels indicating the EPA registration number and the manufacturer's registered uses. Pesticides shall be stored according to manufacturer's instructions and under lock and key when unattended.

#### 3.10.2 Qualifications

For the application of pesticides, the Contractor shall use the services of a subcontractor whose principal business is pest control. The subcontractor shall be licensed and certified in the state where the work is to be performed.

#### 3.10.3 Pesticide Handling Requirements

The Contractor shall formulate, treat with, and dispose of pesticides and associated containers in accordance with label directions and shall use the clothing and personal protective equipment specified on the labeling for use during all phases of the application. Material Safety Data Sheets (MSDS) shall be available for all pesticide products.

#### 3.10.4 Application

Pesticides shall be applied by a State Certified Pesticide Applicator in accordance with EPA label restrictions and recommendation. The Certified Applicator shall wear clothing and personal protective equipment as specified on the pesticide label. Water used for formulating shall only come from locations designated by the Contracting Officer. The Contractor shall not allow the equipment to overflow. Prior to application of pesticide, all equipment shall be inspected for leaks, clogging, wear, or damage and shall be repaired prior to being used.

### 3.11 PREVIOUSLY USED EQUIPMENT

The Contractor shall clean all previously used construction equipment prior to bringing it onto the project site. The Contractor shall ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. The Contractor shall consult with the USDA

jurisdictional office for additional cleaning requirements.

### 3.12 MAINTENANCE OF POLLUTION FACILITIES

The Contractor shall maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

### 3.13 MILITARY MUNITIONS

In the event the Contractor discovers or uncovers military munitions as defined in 40 CFR 260, the Contractor shall immediately stop work in that area and immediately inform the Contracting Officer.

### 3.14 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel shall be trained in all phases of environmental protection and pollution control. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel prior to commencing construction activities. Additional meetings shall be conducted for new personnel and when site conditions change. The training and meeting agenda shall include: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area.

### 3.15 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for construction in accordance with Contract Clause: "Cleaning Up". The Contractor shall, unless otherwise instructed in writing by the Contracting Officer, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. The disturbed area shall be graded, filled and the entire area seeded unless otherwise indicated.

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## SECTION 01356A

STORM WATER POLLUTION PREVENTION MEASURES  
08/96

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

## ASTM INTERNATIONAL (ASTM)

|             |  |
|-------------|--|
| ASTM D 4439 | (2004) Geosynthetics   |
| ASTM D 4491 | (1999a) Water Permeability of Geotextiles by Permittivity                      |
| ASTM D 4533 | (1991; R 1996) Trapezoid Tearing Strength of Geotextiles                       |
| ASTM D 4632 | (1991; R 2003) Grab Breaking Load and Elongation of Geotextiles                |
| ASTM D 4751 | (1999a) Determining Apparent Opening Size of a Geotextile                      |
| ASTM D 4873 | (2002) Identification, Storage, and Handling of Geosynthetic Rolls and Samples |

## 1.2 GENERAL

The Contractor shall implement the storm water pollution prevention measures specified in this section in a manner which will meet the requirements of Section 01355A ENVIRONMENTAL PROTECTION, and the requirements of the National Pollution Discharge Elimination System (NPDES) permit attached to that Section.

## 1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

## SD-07 Certificates

## Mill Certificate or Affidavit

Certificate attesting that the Contractor has met all specified requirements.

#### 1.4 EROSION AND SEDIMENT CONTROLS

The controls and measures required by the Contractor are described below.

##### 1.4.1 Stabilization Practices

The stabilization practices to be implemented shall include temporary seeding, mulching, geotextiles, protection of trees, etc. On his daily CQC Report, the Contractor shall record the dates when the major grading activities occur, (e.g., clearing and grubbing, excavation, embankment, and grading); when construction activities temporarily or permanently cease on a portion of the site; and when stabilization practices are initiated. Except as provided in paragraphs UNSUITABLE CONDITIONS and NO ACTIVITY FOR LESS THAN 21 DAYS, stabilization practices shall be initiated as soon as practicable, but no more than 14 days, in any portion of the site where construction activities have temporarily or permanently ceased.

##### 1.4.1.1 Unsuitable Conditions

Where the initiation of stabilization measures by the fourteenth day after construction activity temporarily or permanently ceases is precluded by unsuitable conditions caused by the weather, stabilization practices shall be initiated as soon as practicable after conditions become suitable.

##### 1.4.1.2 No Activity for Less Than 21 Days

Where construction activity will resume on a portion of the site within 21 days from when activities ceased (e.g., the total time period that construction activity is temporarily ceased is less than 21 days), then stabilization practices do not have to be initiated on that portion of the site by the fourteenth day after construction activity temporarily ceased.

##### 1.4.2 Structural Practices

Structural practices shall be implemented to divert flows from exposed soils, temporarily store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Structural practices shall be implemented in a timely manner during the construction process to minimize erosion and sediment runoff. Structural practices shall include the following devices. Location and details of installation and construction are shown on the drawings.

##### 1.4.2.1 Silt Fences

The Contractor shall provide silt fences as a temporary structural practice to minimize erosion and sediment runoff. Silt fences shall be properly installed to effectively retain sediment immediately after completing each phase of work where erosion would occur in the form of sheet and rill erosion (e.g. clearing and grubbing, excavation, embankment, and grading). Silt fences shall be installed in the locations indicated on the drawings. Final removal of silt fence barriers shall be upon approval by the Contracting Officer.

##### 1.4.2.2 Straw Bales

The Contractor shall provide bales of straw as a temporary structural practice to minimize erosion and sediment runoff. Bales shall be properly placed to effectively retain sediment immediately after completing each phase of work (e.g., clearing and grubbing, excavation, embankment, and



grading) in each independent runoff area (e.g., after clearing and grubbing in a area between a ridge and drain, bales shall be placed as work progresses, bales shall be removed/replaced/relocated as needed for work to progress in the drainage area). Areas where straw bales are to be used are shown on the drawings. Final removal of straw bale barriers shall be upon approval by the Contracting Officer. Straw bales may also be substituted for Type A silt fence with the approval of the Contracting Officer.

#### 1.4.2.3 Sediment Traps

The contractor shall provide sediment traps of the type and at the locations shown on the plans. Sediment traps are placed around temporary and permanent drainage structures to prevent sediment from entering storm drain pipes. Final removal of the sediment traps should be upon approval of the Contracting Officer.

#### 1.4.2.4 Construction Exits

The contractor should provide construction exits at the locations shown on the plans. Materials and dimensions should conform to the detail included in the plan. The purpose of construction exit is to remove dirt and mud from vehicle tires prior to entering a paved road. The contractor shall maintain the exit (including washing the stone or adding additional stone) in a working manner until the project is complete. Final removal of the construction exits shall be upon approval by the Contracting Officer.

## PART 2 PRODUCTS

### 2.1 COMPONENTS FOR SILT FENCES

#### 2.1.1 Filter Fabric

The geotextile shall comply with the requirements of ASTM D 4439, and shall consist of polymeric filaments which are formed into a stable network such that filaments retain their relative positions. The filament shall consist of a long-chain synthetic polymer composed of at least 85 percent by weight of ester, propylene, or amide, and shall contain stabilizers and/or inhibitors added to the base plastic to make the filaments resistance to deterioration due to ultraviolet and heat exposure. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable construction life at a temperature range of 0 to 120 degrees F. The filter fabric shall meet the following requirements:

#### FILTER FABRIC FOR SILT SCREEN FENCE

| PHYSICAL PROPERTY    | TEST PROCEDURE | STRENGTH REQUIREMENT |
|----------------------|----------------|----------------------|
| Grab Tensile         | ASTM D 4632    | 100 lbs. min.        |
| Elongation (%)       |                | 30 % max.            |
| Trapezoid Tear       | ASTM D 4533    | 55 lbs. min.         |
| Permittivity         | ASTM D 4491    | 0.2 sec-1            |
| AOS (U.S. Std Sieve) | ASTM D 4751    | 20-100               |

### 2.1.2 Silt Fence Stakes and Posts

The Contractor may use either wooden stakes or steel posts for fence construction. Wooden stakes utilized for silt fence construction, shall have a minimum cross section of 2 inches by 2 inches when oak is used and 4 inches by 4 inches when pine is used, and shall have a minimum length of 5 feet. Steel posts (standard "U" or "T" section) utilized for silt fence construction, shall have a minimum weight of 1.33 pounds per linear foot and a minimum length of 5 feet.

### 2.1.3 Mill Certificate or Affidavit

A mill certificate or affidavit shall be provided attesting that the fabric and factory seams meet chemical, physical, and manufacturing requirements specified above. The mill certificate or affidavit shall specify the actual Minimum Average Roll Values and shall identify the fabric supplied by roll identification numbers. The Contractor shall submit a mill certificate or affidavit signed by a legally authorized official from the company manufacturing the filter fabric.

### 2.1.4 Identification Storage and Handling

Filter fabric shall be identified, stored and handled in accordance with ASTM D 4873.

## 2.2 COMPONENTS FOR STRAW BALES

The straw in the bales shall be stalks from oats, wheat, rye, barley, rice, or from grasses such as bahia, bermuda, etc., furnished in air dry condition. The bales shall have a standard cross section of 14 inches by 18 inches. All bales shall be either wire-bound or string-tied. The Contractor may use either wooden stakes or steel posts to secure the straw bales to the ground. Wooden stakes utilized for this purpose, shall have a minimum dimensions of 2 inches x 2 inches in cross section and shall have a minimum length of 3 feet. Steel posts (standard "U" or "T" section) utilized for securing straw bales, shall have a minimum weight of 1.33 pounds per linear foot and a minimum length of 3 feet.

## PART 3 EXECUTION

### 3.1 INSTALLATION OF SILT FENCES

Silt fences shall extend a minimum of 22 inches above the ground surface and shall not exceed 34 inches above the ground surface. Filter fabric shall be from a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are unavoidable, filter fabric shall be spliced together at a support post, with a minimum 6 inch overlap, and securely sealed. A trench shall be excavated approximately 4 inches wide and 4 inches deep on the upslope side of the location of the silt fence. The 4-inch by 4-inch trench shall be backfilled and the soil compacted over the filter fabric. Silt fences shall be removed upon approval by the Contracting Officer.

### 3.2 INSTALLATION OF STRAW BALES

Straw bales shall be placed in a single row, lengthwise on the contour, with ends of adjacent bales tightly abutting one another. Straw bales shall be installed so that bindings are oriented around the sides rather than along the tops and bottoms of the bales in order to prevent

deterioration of the bindings. The barrier shall be entrenched and backfilled. A trench shall be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. After the bales are staked and chinked (gaps filled by wedging with straw), the excavated soil shall be backfilled against the barrier. Backfill soil shall conform to the ground level on the downhill side and shall be built up to 4 inches against the uphill side of the barrier. Loose straw shall be scattered over the area immediately uphill from a straw bale barrier to increase barrier efficiency. Each bale shall be securely anchored by at least two stakes driven through the bale. The first stake or steel post in each bale shall be driven toward the previously laid bale to force the bales together. Stakes or steel pickets shall be driven a minimum 18 inches deep into the ground to securely anchor the bales.

### 3.3 MAINTENANCE

The Contractor shall maintain the temporary and permanent vegetation, erosion and sediment control measures, and other protective measures in good and effective operating condition by performing routine inspections to determine condition and effectiveness, by restoration of destroyed vegetative cover, and by repair of erosion and sediment control measures and other protective measures. The following procedures shall be followed to maintain the protective measures.

#### 3.3.1 Silt Fence Maintenance

Silt fences shall be inspected in accordance with paragraph INSPECTIONS. Any required repairs shall be made promptly. Close attention shall be paid to the repair of damaged silt fence resulting from end runs and undercutting. Should the fabric on a silt fence decompose or become ineffective, and the barrier is still necessary, the fabric shall be replaced promptly. Sediment deposits shall be removed when deposits reach one-third of the height of the barrier. When a silt fence is no longer required, it shall be removed. The immediate area occupied by the fence and any sediment deposits shall be shaped to an acceptable grade. The areas disturbed by this shaping shall receive erosion control if required by Section 02370 SOIL SURFACE EROSION CONTROL.

#### 3.3.2 Straw Bale Maintenance

Straw bale barriers shall be inspected in accordance with paragraph INSPECTIONS. Close attention shall be paid to the repair of damaged bales, end runs and undercutting beneath bales. Necessary repairs to barriers or replacement of bales shall be accomplished promptly. Sediment deposits shall be removed when deposits reach one-half of the height of the barrier.

Bale rows used to retain sediment shall be turned uphill at each end of each row. When a straw bale barrier is no longer required, it shall be removed. The immediate area occupied by the bales and any sediment deposits shall be shaped to an acceptable grade. The areas disturbed by this shaping shall be seeded in accordance with Section 02921 SEEDING.

### 3.4 INSPECTIONS

#### 3.4.1 General

The Contractor shall inspect disturbed areas of the construction site, areas used for storage of materials that are exposed to precipitation that have not been finally stabilized, stabilization practices, structural practices, other controls, and area where vehicles exit the site at least

once every seven (7) calendar days and within 24 hours of the end of any storm that produces 0.5 inches or more rainfall at the site. Where sites have been finally stabilized, such inspection shall be conducted at least once every month.

#### 3.4.2 Inspections Details

Disturbed areas and areas used for material storage that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the Storm Water Pollution Prevention Plan shall be observed to ensure that they are operating correctly. Discharge locations or points shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles exit the site shall be inspected for evidence of offsite sediment tracking.

#### 3.4.3 Inspection Reports

For each inspection conducted, the Contractor shall prepare a report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the Storm Water Pollution Prevention Plan, maintenance performed, and actions taken. The report shall be furnished to the Contracting Officer within 24 hours of the inspection as a part of the Contractor's daily CQC REPORT. A copy of the inspection report shall be maintained on the job site.

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01420

SOURCES FOR REFERENCE PUBLICATIONS

**06/05**

1.1 REFERENCES

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## SECTION 01420

## SOURCES FOR REFERENCE PUBLICATIONS

06/05

## 1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization, (e.g. ASTM B 564 Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

## 1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the standards producing organization should be ordered from the source by title rather than by number.

ACI INTERNATIONAL (ACI)  
P.O. Box 9094  
Farmington Hills, MI 48333-9094  
Ph: 248-848-3700  
Fax: 248-848-3701  
E-mail: [bkstore@concrete.org](mailto:bkstore@concrete.org)  
Internet: <http://www.aci-int.org>

AIR-CONDITIONING AND REFRIGERATION INSTITUTE (ARI)  
4100 North Fairfax Drive, Suite 200  
Arlington, VA 22203  
Ph: 703-524-8800  
Fax: 703-528-3816  
E-mail: [ari@ari.org](mailto:ari@ari.org)  
Internet: <http://www.ari.org>

AIR CONDITIONING CONTRACTORS OF AMERICA (ACCA)  
2800 Shirlington Road, Suite 300  
Arlington, VA 22206  
Ph: 703-575-4477  
Fax: 703-575-4449  
E-mail: [info@acca.org](mailto:info@acca.org)  
Internet: <http://www.acca.org>

AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL (AMCA)  
30 West University Drive  
Arlington Heights, IL 60004-1893

Ph: 847-394-0150  
Fax: 847-253-0088  
E-mail: [amca@amca.org](mailto:amca@amca.org)  
Internet: <http://www.amca.org>

ALLIANCE FOR TELECOMMUNICATIONS INDUSTRY SOLUTIONS (ATIS)  
1200 G Street, NW, Suite 500  
Washington, D.C. 20005  
Ph: 202-628-6380  
Fax: 202-393-5453  
Internet: <http://www.atis.org>

ALUMINUM ASSOCIATION (AA)  
900 19th Street N.W., Suite 300  
Washington, DC 20006  
Ph: 202-862-5100  
Fax: 202-862-5164  
Internet: <http://www.aluminum.org>

AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA)  
1827 Walden Office Square  
Suite 550  
Schaumburg, IL 60173-4268  
Ph: 847-303-5664  
Fax: 847-303-5774  
E-mail: [webmaster@aamanet.org](mailto:webmaster@aamanet.org)  
Internet: <http://www.aamanet.org>

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS  
(AASHTO)  
444 North Capital Street, NW, Suite 249  
Washington, DC 20001  
Ph: 202-624-5800  
Fax: 202-624-5806  
E-Mail: [info@ashto.org](mailto:info@ashto.org)  
Internet: <http://www.aashto.org>

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)  
P.O. Box 12215  
Research Triangle Park, NC 27709-2215  
Ph: 919-549-8141  
Fax: 919-549-8933  
E-mail: [quantem@aatcc.org](mailto:quantem@aatcc.org)  
Internet: <http://www.aatcc.org>

AMERICAN BEARING MANUFACTURERS ASSOCIATION (ABMA)  
2025 M Street, NW, Suite 800  
Washington, DC 20036  
Ph: 202-367-1155  
Fax: 202-367-2155  
E-mail: [info.abma@smithbucklin.com](mailto:info.abma@smithbucklin.com)  
Internet: <http://www.abma-dc.org>

AMERICAN BOILER MANUFACTURERS ASSOCIATION (ABMA)  
4001 North 9th Street, Suite 226  
Arlington, VA 22203-1900  
Ph: 703-522-7350  
Fax: 703-522-2665  
Internet: <http://www.abma.com>

AMERICAN CONCRETE PIPE ASSOCIATION (ACPA)  
222 West Las Colinas Boulevard, Suite 641  
Irving, TX 75039-5423  
Ph: 972-506-7216  
Fax: 972-506-7682  
E-mail: [info@concrete-pipe.org](mailto:info@concrete-pipe.org)  
Internet: <http://www.concrete-pipe.org>

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)  
1330 Kemper Meadow Drive  
Cincinnati, OH 45240  
Ph: 513-742-2020  
Fax: 513-742-3355  
E-mail: [mail@acgih.org](mailto:mail@acgih.org)  
Internet: <http://www.acgih.org>

AMERICAN FOREST & PAPER ASSOCIATION (AF&PA)  
American Wood Council  
ATTN: Publications Department  
1111 Nineteenth Street NW, Suite 800  
Washington, DC 20036  
Ph: 800-890-7732 or 202-463-2766  
Fax: 202-463-2791  
Internet: <http://www.awc.org/>

AMERICAN GAS ASSOCIATION (AGA)  
400 North Capitol Street N.W.  
Washington, D.C. 20001  
Ph: 202-824-7000  
Fax: 202-824-7115  
E-mail: [webmaster@aga.org](mailto:webmaster@aga.org)  
Internet: <http://www.aga.org>

AMERICAN GEAR MANUFACTURERS ASSOCIATION (AGMA)  
500 Montgomery Street, Suite 300  
Alexandria, VA 22314-1560  
Ph: 703-684-0211  
Fax: 703-684-0242  
E-mail: [webmaster@agma.org](mailto:webmaster@agma.org)  
Internet: <http://www.agma.org>

AMERICAN HARDBOARD ASSOCIATION (AHA)  
c/o Composite Panel Association  
18922 Premiere Court  
Gaithersburg, MD 20879-1574  
Ph: 301-670-0604  
Fax: 301-840-1252  
Internet: <http://www.pbmdf.org>

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)  
One East Wacker Drive, Suite 3100  
Chicago, IL 60601-2001  
Ph: 312-670-2400  
Fax: 312-670-5403  
Publications: 800-644-2400  
E-mail: [pubs@aisc.org](mailto:pubs@aisc.org)  
Internet: <http://www.aisc.org>



AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC)  
7012 South Revere Parkway, Suite 140  
Englewood, CO 80112  
Ph: 303-792-9559  
Fax: 303-792-0669  
E-mail: [info@aitc-glulam.org](mailto:info@aitc-glulam.org)  
Internet: <http://www.aitc-glulam.org>

AMERICAN IRON AND STEEL INSTITUTE (AISI)  
1140 Connecticut Avenue, NW, Suite 705  
Washington, DC 20036  
Ph: 202-452-7100  
Fax: 202-463-6573  
Internet: <http://www.steel.org>

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)  
1819 L Street, NW, 6th Floor  
Washington, DC 20036  
Ph: 202-293-8020  
Fax: 202-293-9287  
E-mail: [info@ansi.org](mailto:info@ansi.org)  
Internet: <http://www.ansi.org/>

--- ANSI documents beginning with the letter "S" can be ordered from:

Acoustical Society of America (ASA)  
2 Huntington Quadrangle, Suite 1N01  
Melville, NY 11747-4502  
Ph: 516-576-2360  
Fax: 516-576-2377  
E-mail: [asa@aip.org](mailto:asa@aip.org)  
Internet: <http://asa.aip.org>

AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA)  
1000 Vermont Avenue, NW, Suite 300  
Washington, DC 20005-4914  
Ph: 202-789-2900  
Fax: 202-789-1893  
Internet: <http://www.anla.org>

AMERICAN PETROLEUM INSTITUTE (API)  
1220 L Street, NW  
Washington, DC 20005-4070  
Ph: 202-682-8000  
Fax: 202-682-8223  
Internet: <http://www.api.org>

AMERICAN PUBLIC HEALTH ASSOCIATION (APHA)  
800 I Street, NW  
Washington, DC 20001  
Ph: 202-777-2742  
Fax: 202-777-2534  
E-mail: [comments@apha.org](mailto:comments@apha.org)  
Internet: <http://www.apha.org>

AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION  
(AREMA)

8201 Corporate Drive, Suite 1125  
Landover, MD 20785-2230  
Ph: 301-459-3200  
Fax: 301-459-8077  
Internet: <http://www.arema.org>

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (ASNT)

1711 Arlingate Lane  
P.O. Box 28518  
Columbus, OH 43228-0518  
Ph: 800-222-2768; 614-274-6003  
Fax: 614-274-6899  
E-mail: [webmaster@asnt.org](mailto:webmaster@asnt.org)  
Internet: <http://www.asnt.org>

AMERICAN SOCIETY FOR QUALITY (ASQ)

600 North Plankinton Avenue  
Milwaukee, WI 53203  
Ph: 800-248-1946; 414-272-8575  
Fax: 414-272-1734  
E-mail: [cs@asq.org](mailto:cs@asq.org)  
Internet: <http://www.asq.org>

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

1801 Alexander Bell Drive  
Reston, VA 20191-4400  
Ph: 703-295-6300 - 800-548-2723  
Fax: 703-295-6222  
E-mail: [marketing@asce.org](mailto:marketing@asce.org)  
Internet: <http://www.asce.org>

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING  
ENGINEERS (ASHRAE)

1791 Tullie Circle, NE  
Atlanta, GA 30329  
Ph: 800-527-4723 or 404-636-8400  
Fax: 404-321-5478  
E-mail: [ashrae@ashrae.org](mailto:ashrae@ashrae.org)  
Internet: <http://www.ashrae.org>

AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE)

901 Canterbury, Suite A  
Westlake, OH 44145  
Ph: 440-835-3040  
Fax: 440-835-3488  
E-mail: [info@asse-plumbing.org](mailto:info@asse-plumbing.org)  
Internet: <http://www.asse-plumbing.org>

AMERICAN WATER WORKS ASSOCIATION (AWWA)

6666 West Quincy Avenue  
Denver, CO 80235  
Ph: 303-794-7711  
Fax: 303-347-0804  
Internet: <http://www.awwa.org>

AMERICAN WELDING SOCIETY (AWS)

550 N.W. LeJeune Road

Miami, FL 33126  
Ph: 800-443-9353 - 305-443-9353  
Fax: 305-443-7559  
E-mail: [info@aws.org](mailto:info@aws.org)  
Internet: <http://www.aws.org>

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)  
P.O. Box 388  
Selma, AL 36702-0388  
Ph: 334-874-9800  
Fax: 334-874-9008  
E-mail: [email@awpa.com](mailto:email@awpa.com)  
Internet: <http://www.awpa.com>

APA - THE ENGINEERED WOOD ASSOCIATION (APA)  
7011 South 19th  
Tacoma, WA 98466  
Ph: 253-565-6600  
Fax: 253-565-7265  
E-mail: [help@apawood.org](mailto:help@apawood.org)  
Internet: <http://www.apawood.org>

ARCHITECTURAL WOODWORK INSTITUTE (AWI)  
1952 Isaac Newton Square West  
Reston, VA 20190  
Ph: 703-733-0600  
Fax: 703-733-0584  
Internet: <http://www.awinet.org>

ASBESTOS CEMENT PRODUCT PRODUCERS ASSOCIATION (ACPPA)  
PMB114-1745 Jefferson Davis Highway  
Arlington, VA 22202  
Ph: 514-861-1153  
Fax: 514-861-1152  
Internet: [www.asbestos-institute.ca](http://www.asbestos-institute.ca)

ASM INTERNATIONAL (ASM)  
9639 Kinsman Road  
Materials Park, OH 44073-0002  
Ph: 440-338-5151  
Fax: 440-338-4634  
E-mail: [cust-srv@asminternational.org](mailto:cust-srv@asminternational.org)  
Internet: <http://www.asm-international.org>

ASME INTERNATIONAL (ASME)  
Three Park Avenue  
New York, NY 10016-5990  
Ph: 212-591-7722  
Fax: 212-591-7674  
E-mail: [infocentral@asme.org](mailto:infocentral@asme.org)  
Internet: <http://www.asme.org>

ASPHALT INSTITUTE (AI)  
Research Park Drive  
P.O. Box 14052  
Lexington, KY 40512-4052  
Ph: 859-288-4960  
Fax: 859-288-4999  
E-mail: [webmaster@asphaltinstitute.org](mailto:webmaster@asphaltinstitute.org)

Internet: <http://www.asphaltinstitute.org>

ASSOCIATED AIR BALANCE COUNCIL (AABC)  
1518 K Street, NW  
Washington, DC 20005  
Ph: 202-737-0202  
Fax: 202-638-4833  
E-mail: [aabchq@aol.com](mailto:aabchq@aol.com)  
Internet: <http://www.aabchq.com>

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION (AAMI)  
1110 North Glebe Road, Suite 220  
Arlington, VA 22201-4795  
Ph: 800-332-2264 or 703-525-4890  
Fax: 703-276-0793  
E-mail: [customerservice@aami.org](mailto:customerservice@aami.org)  
Internet: <http://www.aami.org>

ASSOCIATION FOR IRON AND STEEL TECHNOLOGY (AIST)  
(FORMERLY: IRON & STEEL SOCIETY (ISS))  
186 Thorn Hill Road  
Warrendale, PA 15086-7528  
Ph: 724-776-6040  
Fax: 724-776-1880  
E-Mail: [info@aistech.org](mailto:info@aistech.org)  
Internet: <http://www.aistech.org>

ASSOCIATION OF EDISON ILLUMINATING COMPANIES (AEIC)  
600 North 18th Street  
P.O. Box 2641  
Birmingham, AL 35291  
Ph: 205-257-2530  
Fax: 205-257-2540  
Internet: <http://www.aeic.org>

ASSOCIATION OF HOME APPLIANCE MANUFACTURERS (AHAM)  
1111 19th Street NW, Suite 402  
Washington, DC 20036  
Ph: 202-872-5955  
Fax: 202-872-9354  
E-mail: [aham@aham.org](mailto:aham@aham.org)  
Internet: <http://www.aham.org>

ASSOCIATION OF THE WALL AND CEILING INDUSTRIES - INTERNATIONAL  
(AWCI)

803 West Broad Street, Suite 600  
Falls Church, VA 22046  
Ph: 703-534-8300  
Fax: 703-534-8307  
E-mail: [info@awci.org](mailto:info@awci.org)  
Internet: <http://www.awci.org>

ASTM INTERNATIONAL (ASTM)  
100 Barr Harbor Drive, P.O. Box C700  
West Conshohocken, PA 19428-2959  
Ph: 610-832-9500  
Fax: 610-832-9555  
E-mail: [service@astm.org](mailto:service@astm.org)

Internet: <http://www.astm.org>

BIFMA INTERNATIONAL (BIFMA)  
2680 Horizon Drive SE, Suite A-1  
Grand Rapids, MI 49546-7500  
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Fax: 616-285-3765  
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01/03

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## SECTION 01451A

CONTRACTOR QUALITY CONTROL  
01/03

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

## ASTM INTERNATIONAL (ASTM)

|             |   |
|-------------|---|
| ASTM D 3740 | (2004) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction |
| ASTM E 329  | (2003) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction  |

## 1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

## PART 2 PRODUCTS (Not Applicable)

## PART 3 EXECUTION

## 3.1 GENERAL REQUIREMENTS

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause titled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The site project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the contract. The site project superintendent in this context shall be the highest level manager responsible for the overall construction activities at the site, including quality and production. The site project superintendent shall maintain a physical presence at the site at all times, except as otherwise acceptable to the Contracting Officer, and shall be responsible for all construction and construction related activities at the site.

### 3.2 QUALITY CONTROL PLAN

The Contractor shall furnish for review by the Government, not later than 30 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause titled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used. The Government will consider an interim plan for the first 20 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

#### 3.2.1 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project superintendent.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Government.
- d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.
- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities approved by the Contracting Officer shall be used.)
- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking construction design and construction

deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.

- h. Reporting procedures, including proposed reporting formats.
- i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

### 3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, Postaward Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. The CQC Plan shall be submitted for review a minimum of 10 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, design activities, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

### 3.4 QUALITY CONTROL ORGANIZATION

#### 3.4.1 Personnel Requirements

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure safety and contract compliance. The Safety and Health Manager shall receive direction and authority from the CQC System Manager and shall serve as a member of the CQC staff. Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly will also be included as part of the CQC organization. The Contractor's CQC staff shall maintain a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure contract compliance. The CQC staff shall be subject to acceptance by the Contracting Officer. The Contractor shall provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Complete records of all letters, material submittals, shop drawing submittals, schedules and all other project documentation shall be promptly furnished to the CQC organization by the Contractor. The CQC organization shall be responsible to maintain these documents and records at the site at all times, except as otherwise acceptable to the Contracting Officer.

### 3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within the onsite work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a construction person with a minimum of 10 years in related work. This CQC System Manager shall be on the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be assigned as System Manager but may have duties as project superintendent in addition to quality control. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. The requirements for the alternate shall be the same as for the designated CQC System Manager.

### 3.4.3 CQC Personnel

In addition to CQC personnel specified elsewhere in the contract, the Contractor shall provide as part of the CQC organization specialized personnel to assist the CQC System Manager for the following areas: electrical, civil, structural, submittals clerk. These individuals may be employees of the prime or subcontractor; be responsible to the CQC System Manager; be physically present at the construction site during work on their areas of responsibility; have the necessary education and/or experience in accordance with the experience matrix listed herein. These individuals may perform other duties but must be allowed sufficient time to perform their assigned quality control duties as described in the Quality Control Plan.

Experience Matrix

| Area |            | Qualifications  |
|------|------------|---|
| a.   | Civil      | Graduate Civil Engineer with 2 years experience in the type of work being performed on this project or technician with 5 yrs related experience |
| b.   | Electrical | Graduate Electrical Engineer with 2 yrs related experience or person with 5 yrs related experience  |
| c.   | Structural | Graduate Structural Engineer with 2 yrs experience or person with 5 yrs related experience  |
| d.   | Submittals | Submittal Clerk with 1 yr experience  |

### 3.4.4 Additional Requirement

In addition to the above experience and/or education requirements the CQC

System Manager shall have completed the course entitled "Construction Quality Management For Contractors". This course is periodically offered at Fort Stewart, Georgia.

#### 3.4.5 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

#### 3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, shall be made as specified in Section 01330 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals and deliverables are in compliance with the contract requirements.

#### 3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of the construction work as follows:

##### 3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

- a. A review of each paragraph of applicable specifications, reference codes, and standards. A copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by Government personnel until final acceptance of the work.
- b. A review of the contract drawings.
- c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
- d. Review of provisions that have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. A review of the appropriate activity hazard analysis to assure safety requirements are met.

- h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- j. Discussion of the initial control phase.
- k. The Government shall be notified at least 24 hours in advance of beginning the preparatory control phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

#### 3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. The Government shall be notified at least 8 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.
- g. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

#### 3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to

the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

#### 3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

### 3.7 TESTS

#### 3.7.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. The Contractor shall perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- e. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

#### 3.7.2 Testing Laboratories

##### 3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740

and ASTM E 329.

#### 3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge of \$20 to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

#### 3.7.3 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

#### 3.7.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to a laboratory designated by the Contracting Officer.

Coordination for each specific test, exact delivery location, and dates will be made through the Area Office.

### 3.8 COMPLETION INSPECTION

#### 3.8.1 Punch-Out Inspection

Near the end of the work, or any increment of the work established by a time stated in the SPECIAL CONTRACT REQUIREMENTS Clause, "Commencement, Prosecution, and Completion of Work", or by the specifications, the CQC Manager shall conduct an inspection of the work. A punch list of items which do not conform to the approved drawings and specifications shall be prepared and included in the CQC documentation, as required by paragraph DOCUMENTATION. The list of deficiencies shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final inspection.

#### 3.8.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.



### 3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

### 3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase shall be identified (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- f. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.
- g. Offsite surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- i. Instructions given/received and conflicts in plans and/or specifications.
- j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

### 3.10 SAMPLE FORMS

Sample forms enclosed at the end of this section.

### 3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

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## SECTION 01452

## SPECIAL INSPECTION FOR SEISMIC-RESISTING SYSTEMS

**08/04**

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

## ACI INTERNATIONAL (ACI)

- |               |   |
|---------------|---|
| ACI 318/318R  | (2002) Building Code Requirements for Structural Concrete and Commentary  |
| ACI 530/530.1 | (2002) Building Code Requirements for Masonry Structures and Specifications for Masonry Structures and Commentaries |

## AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

- |          |  |
|----------|--|
| AISC 341 | (2002) Seismic Provisions for Structural Steel Buildings                                     |
| AISC 350 | (1999) Load and Resistance Factor Design (LRFD) Specification for Structural Steel Buildings |

## ASTM INTERNATIONAL (ASTM)

- |                   |   |
|-------------------|---|
| ASTM A 615/A 615M | (2004b) Deformed and Plain Billet-Steel Bars for Concrete Reinforcement |
|-------------------|---|

## U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

- |          |  |
|----------|--|
| FEMA 302 | (Feb 1998) NEHRP Recommended Provisions for Seismic Regulations for New Buildings and Other Structures |
|----------|--|

## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Special Inspector; G

Certification attesting that the Special Inspector is qualified

by knowledge and experience to perform the specified Special Inspections. Information, which provides evidence of the knowledge and experience necessary to qualify a person as a Special Inspector for the category of work being certified, will accompany the qualification.

### 1.3 SPECIAL INSPECTOR

A Special Inspector shall be used to perform Special Inspections required by this section. The Special Inspector is a person employed by the Contractor and approved by the Government as being qualified by knowledge and experience to perform the Special Inspection for the category of work being constructed. Special Inspectors shall perform their duties independent from the construction quality control staff employed by the Contractor. More than one Special Inspector may be required to provide the varied knowledge and experience necessary to adequately inspect all of the categories of work requiring Special Inspection.

### 1.4 SPECIAL INSPECTION

The Special Inspection for seismic-resisting system components shall be done as specified. Special Inspector personnel shall be in addition to the quality control inspections and inspectors required elsewhere in this section.

#### 1.4.1 Continuous Special Inspection

Continuous special inspection is the full time observation of the work by the Special Inspector present in the work area whenever work is being performed. Continuous special inspection shall be performed where specified for items as shown on the drawings.

#### 1.4.2 Periodic Special Inspection

Periodic special inspection is the intermittent observation of the work by a Special Inspector present in the work area while work is being performed. The intermittent observation periods shall be at times of significant work, shall be recurrent over the complete work period, and shall total at least 25 percent of the total work time. Periodic special inspection shall be performed where specified for items as shown on the drawings.

## PART 2 PRODUCTS

Not Used

## PART 3 EXECUTION

### 3.1 PERFORMANCE OF INSPECTIONS

Special Inspections shall be performed for the following where designated on the drawings:

#### 3.1.1 Reinforcing Steel

a. Periodic special inspection during and upon completion of the placement of reinforcing steel in shear walls.

### 3.1.2 Structural Concrete

Periodic special inspection during and on completion of the placement of concrete in boundary members of shear walls.

### 3.1.3 Prestressed Concrete

Periodic special inspection during the placement and after completion of placement of prestressing steel. Continuous special inspection during all stressing and grouting operations and during the placement of concrete.

### 3.1.4 Structural Masonry

a. Periodic special inspection during the preparation of mortar, the laying of masonry units, and placement of reinforcement and prior to placement of grout.

b. Continuous special inspection during the welding of reinforcement, grouting, consolidation and reconsolidation and placement of bent-bar anchors.

### 3.1.5 Structural Steel

a. Continuous special inspection for all structural welding, except that periodic special inspection is permitted for single-pass or resistance welds provided the qualifications of the welder and the welding electrodes are inspected at the beginning of the work and all welds are inspected for compliance with the approved construction documents at the completion of welding.

b. Periodic special inspection in accordance with AISC 350 for the installation of bolts in intermediate moment frames except that bolts not required to be fully tensioned need not be inspected for bolt tension, other than to ensure that the plies of the connected elements have been brought into snug contact

### 3.1.6 Architectural Components

Special inspection of the architectural components shall assure that the methods of anchoring and fastening indicated on the drawings are being complied with at the onset of construction of the components, and that the specified or shown number, spacing, and types of fasteners were actually installed. Special inspection for architectural components shall be as follows:

a. Periodic special inspection during the erection and fastening of exterior cladding, interior nonloadbearing partition walls.

### 3.1.7 Mechanical and Electrical Components

Special inspection of the mechanical and electrical components shall assure that the methods of anchoring and fastening indicated on the drawings are being complied with at the onset of construction of the component, and that the specified or shown number, spacing, and types of fasteners were actually installed. Special inspection for mechanical and electrical components shall be as follows:

a. Periodic special inspection during the anchorage of electrical equipment for emergency or standby power systems.

b. Periodic special inspection during the installation of anchorage of all other electrical equipment.

c. Periodic special inspection during installation for flammable, combustible, or highly toxic piping systems and their associated mechanical units.

d. Periodic special inspection during the installation of HVAC ductwork that will contain hazardous materials.

### 3.1.8 Seismic Isolation System

Periodic special inspection during the fabrication and installation of isolator units.

### 3.1.9 Energy Dissipation System

Periodic special inspection during the fabrication and installation of energy dissipation devices.

## 3.2 TESTING

The special inspector shall be responsible for verifying that the testing requirements are performed by an approved testing agency for compliance with the following, where shown on the drawings:

a. Reinforcing and Prestressing Steel: Special testing of reinforcing and prestressing steel shall be as follows:

(1) Examine certified mill test reports for each shipment of reinforcing steel used in reinforced concrete reinforced masonry shear walls. The special inspector shall determine conformance with the construction documents.

(2) Examine the reports for chemical tests, done in accordance with Sec. 3.5.2 of ACI 318/318R, which were performed to determine the weldability of ASTM A 615/A 615M reinforcing steel.

b. Structural Concrete: Verify that samples of structural concrete obtained at the project site, along with all material components obtained at the batch plant, have been tested in accordance with the requirements of ACI 318/318R and comply with all acceptance provisions contained therein.

c. Structural Masonry: Verify that all quality assurance testing of structural masonry along with all material components is in accordance with the requirements of ACI 530/530.1 and complies with all acceptance provisions contained therein.

d. Structural Steel:

(1) Verify that all quality assurance testing needed to confirm required material properties contained in Section 05120 STRUCTURAL STEEL has been done in accordance with applicable provisions in AISC 341 and AISC 350 and that the test results comply with all acceptance provisions contained therein.

(2) When a flange or a plate of steel member with a base metal thickness greater than 1.5 inches, is joined by welding so that the flange

or plate is subjected to through-thickness weld shrinkage strains, verify that the required ultrasonic testing for discontinuities behind and adjacent to such welds has been done after joint completion. Further verify that any material discontinuities rejected on the basis of the requirements contained in Section 05120 STRUCTURAL STEEL were repaired and were retested after the repairs and found acceptable.

e. Seismically Isolated Structures: Verify that the required system and component tests for seismically isolated structures have been done in accordance with FEMA 302 and comply with all acceptance provisions contained therein.

f. Energy Dissipation Systems: Verify that the required system and component tests for seismic energy dissipation systems have been done in accordance with FEMA 302 and comply with all acceptance provisions contained therein.

### 3.3 REPORTING AND COMPLIANCE PROCEDURES

- a. On the first day of each month, the Contractor shall furnish to the Government five copies of the combined progress reports of the special inspector's observations. These progress reports shall list all special inspections of construction or reviews of testing performed during that month, note all uncorrected deficiencies, and describe the corrections made both to these deficiencies and to previously reported deficiencies. Each monthly report shall be signed by all special inspectors who performed special inspections of construction or reviewed testing during that month, regardless of whether they reported any deficiencies. Each monthly report shall be signed by the Contractor.
- b. At completion of construction, each special inspector shall prepare and sign a final report attesting that all work they inspected and all testing and test reports they reviewed were completed in accordance with the approved construction documents and that deficiencies identified were satisfactorily corrected. The Contractor shall submit a combined final report containing the signed final reports of all the special inspectors. The Contractor shall sign the combined final report attesting that all final reports of special inspectors that performed work to comply with these construction documents are contained therein, and that the Contractor has reviewed and approved all of the individual inspector's final reports.

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## SECTION 01500A

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02/97

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## SECTION 01500A

## TEMPORARY CONSTRUCTION FACILITIES

02/97

## PART 1 GENERAL

## 1.1 General Requirements

## 1.1.1 Site Plan

The Contractor shall prepare a site plan indicating the proposed location and dimensions of any area to be fenced and used by the Contractor, the number of trailers to be used, avenues of ingress/egress to the fenced area and details of the fence installation. Any areas which may have to be graveled to prevent the tracking of mud shall also be identified. The Contractor shall also indicate if the use of a supplemental or other staging area is desired.

## 1.1.2 Identification of Employees

The Contractor shall be responsible for furnishing to each employee, and for requiring each employee engaged on the work to display, identification as approved and directed by the Contracting Officer. Prescribed identification shall immediately be delivered to the Contracting Officer for cancellation upon release of any employee. When required, the Contractor shall obtain and provide fingerprints of persons employed on the project. Contractor and subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.

## 1.1.3 Employee Parking

Contractor employees shall park privately owned vehicles in an area designated by the Contracting Officer. This area will be within reasonable walking distance of the construction site. Contractor employee parking shall not interfere with existing and established parking requirements of the military installation.

## 1.2 AVAILABILITY AND USE OF UTILITY SERVICES

## 1.2.1 Payment for Utility Services

The Government will make all reasonably required utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the Government or, where the utility is produced by the Government, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.

## 1.2.2 Meters and Temporary Connections

The Contractor, at its expense and in a manner satisfactory to the

Contracting Officer, shall provide and maintain necessary temporary connections, distribution lines, and meter bases (for meters and temporary connections contact and pay Canoochee EMC directly for temporary construction requirements) required to measure the amount of each utility used for the purpose of determining charges. The Contractor shall notify the Contracting Officer, in writing, 5 working days before final electrical connection is desired so that a utilities contract can be established. The Government will provide a meter and make the final hot connection after inspection and approval of the Contractor's temporary wiring installation. The Contractor shall not make the final electrical connection.

#### 1.2.3 Advance Deposit

An advance deposit for utilities consisting of an estimated month's usage or a minimum of \$50.00 will be required. The last monthly bills for the fiscal year will normally be offset by the deposit and adjustments will be billed or returned as appropriate. Services to be rendered for the next fiscal year, beginning 1 October, will require a new deposit. Notification of the due date for this deposit will be mailed to the Contractor prior to the end of the current fiscal year.

#### 1.2.4 Final Meter Reading

Before completion of the work and final acceptance of the work by the Government, the Contractor shall notify the Contracting Officer, in writing, 5 working days before termination is desired. Contact Canoochee EMC for final meter reading, disconnect service, and removal of temporary construction facilities. The Contractor shall then remove all the temporary distribution lines, meter bases, and associated paraphernalia. The Contractor shall pay all outstanding utility bills before final acceptance of the work by the Government.

#### 1.2.5 Sanitation

The Contractor shall provide and maintain within the construction area minimum field-type sanitary facilities approved by the Contracting Officer. Government toilet facilities will not be available to Contractor's personnel.

#### 1.2.6 Telephone

The Contractor shall make arrangements and pay all costs for telephone facilities desired.

### 1.3 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN

#### 1.3.1 Bulletin Board

Immediately upon beginning of work, the Contractor shall provide a weatherproof glass-covered bulletin board not less than 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, and other information approved by the Contracting Officer. The bulletin board shall be located at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer. Legible copies of the aforementioned data shall be displayed until work is completed. Upon completion of work the bulletin board shall be removed by and remain the property of the Contractor.

### 1.3.2 Project and Safety Signs

The requirements for the signs, their content, and location shall be as shown on the drawings. The signs shall be erected within 15 days after receipt of the notice to proceed. The data required by the safety sign shall be corrected daily, with light colored metallic or non-metallic numerals. Upon completion of the project, the signs shall be removed from the site.

## 1.4 PROTECTION AND MAINTENANCE OF TRAFFIC

During construction the Contractor shall provide access and temporary relocated roads as necessary to maintain traffic. The Contractor shall maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The Contractor's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with public traffic. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads. The Contractor shall be responsible for the repair of any damage to roads caused by construction operations.

### 1.4.1 Haul Roads

The Contractor shall, at its own expense, construct access and haul roads necessary for proper prosecution of the work under this contract. Haul roads shall be constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided. The Contractor shall provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control, although optional, shall be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and hauling roads shall be subject to approval by the Contracting Officer. Lighting shall be adequate to assure full and clear visibility for full width of haul road and work areas during any night work operations. Upon completion of the work, haul roads designated by the Contracting Officer shall be removed.

### 1.4.2 Barricades

The Contractor shall erect and maintain temporary barricades to limit public access to hazardous areas. Such barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

## 1.5 CONTRACTOR'S TEMPORARY FACILITIES

### 1.5.1 Administrative Field Offices

The Contractor shall provide and maintain administrative field office facilities within the construction area at the designated site. Government

office and warehouse facilities will not be available to the Contractor's personnel.

#### 1.5.2 Storage Area

The Contractor shall construct a temporary 6 foot high chain link fence around trailers and materials. The fence shall include plastic strip inserts, colored green, so that visibility through the fence is obstructed.

Fence posts may be driven, in lieu of concrete bases, where soil conditions permit. Trailers, materials, or equipment shall not be placed or stored outside the fenced area unless such trailers, materials, or equipment are assigned a separate and distinct storage area by the Contracting Officer away from the vicinity of the construction site but within the military boundaries. Trailers, equipment, or materials shall not be open to public view with the exception of those items which are in support of ongoing work on any given day. Materials shall not be stockpiled outside the fence in preparation for the next day's work. Mobile equipment, such as tractors, wheeled lifting equipment, cranes, trucks, and like equipment, shall be parked within the fenced area at the end of each work day.

#### 1.5.3 Supplemental Storage Area

Upon Contractor's request, the Contracting Officer will designate another or supplemental area for the Contractor's use and storage of trailers, equipment, and materials. This area may not be in close proximity of the construction site but shall be within the military boundaries. Fencing of materials or equipment will not be required at this site; however, the Contractor shall be responsible for cleanliness and orderliness of the area used and for the security of any material or equipment stored in this area. Utilities will not be provided to this area by the Government.

#### 1.5.4 Appearance of Trailers

Trailers utilized by the Contractor for administrative or material storage purposes shall present a clean and neat exterior appearance and shall be in a state of good repair. Trailers which, in the opinion of the Contracting Officer, require exterior painting or maintenance will not be allowed on the military property.

#### 1.5.5 Maintenance of Storage Area

Fencing shall be kept in a state of good repair and proper alignment. Should the Contractor elect to traverse, with construction equipment or other vehicles, grassed or unpaved areas which are not established roadways, such areas shall be covered with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation shall be at the Contractor's discretion. Grass located within the boundaries of the construction site shall be mowed for the duration of the project. Grass and vegetation along fences, buildings, under trailers, and in areas not accessible to mowers shall be edged or trimmed neatly.

#### 1.5.6 Security Provisions

Adequate outside security lighting shall be provided at the Contractor's temporary facilities. The Contractor shall be responsible for the security of its own equipment; in addition, the Contractor shall notify the appropriate law enforcement agency requesting periodic security checks of

the temporary project field office.

#### 1.6 GOVERNMENT FIELD OFFICE

##### 1.6.1 Resident Engineer's Office

The Contractor shall provide the Government Resident Engineer with an office, approximately 200 square feet in floor area, located where directed and providing space heat, electric light and power, and toilet facilities consisting of one lavatory and one water closet complete with connections to water and sewer mains. A mail slot in the door or a lockable mail box mounted on the surface of the door shall be provided. At completion of the project, the office shall remain the property of the Contractor and shall be removed from the site. Utilities shall be connected and disconnected in accordance with local codes and to the satisfaction of the Contracting Officer.

##### 1.6.2 Trailer-Type Mobile Office

The Contractor may, at its option, furnish and maintain a trailer-type mobile office acceptable to the Contracting Officer and providing as a minimum the facilities specified above. The trailer shall be securely anchored to the ground at all four corners to guard against movement during high winds.

#### 1.7 PLANT COMMUNICATION

Whenever the Contractor has the individual elements of its plant so located that operation by normal voice between these elements is not satisfactory, the Contractor shall install a satisfactory means of communication, such as telephone or other suitable devices. The devices shall be made available for use by Government personnel.

#### 1.8 TEMPORARY PROJECT SAFETY FENCING

As soon as practicable, but not later than 15 days after the date established for commencement of work, the Contractor shall furnish and erect temporary project safety fencing at the work site. The safety fencing shall be a high visibility orange colored, high density polyethylene grid or approved equal, a minimum of 42 inches high, supported and tightly secured to steel posts located on maximum 10 foot centers, constructed at the approved location. The safety fencing shall be maintained by the Contractor during the life of the contract and, upon completion and acceptance of the work, shall become the property of the Contractor and shall be removed from the work site.

#### 1.9 CLEANUP

Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away. Materials resulting from demolition activities which are salvageable shall be stored within the fenced area described above or at the supplemental storage area. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored.

#### 1.10 RESTORATION OF STORAGE AREA

Upon completion of the project and after removal of trailers, materials,

and equipment from within the fenced area, the fence shall be removed and will become the property of the Contractor. Areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition. Gravel used to traverse grassed areas shall be removed and the area restored to its original condition, including top soil and seeding as necessary.

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08/04

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## SECTION 01525

SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS  
08/04

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

## AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

|                  |  |
|------------------|--|
| ANSI A10.32      | Personal Fall Protection - Safety Requirements for Construction and Demolition Operations      |
| ANSI/ASSE A10.34 | (2001) Protection of the Public on or Adjacent to Construction Sites                           |
| ANSI Z359.1      | (1992; R 1999) Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components |

## ASME INTERNATIONAL (ASME)

|             |                                     |
|-------------|-------------------------------------|
| ASME B30.22 | (2000) Articulating Boom Cranes     |
| ASME B30.5  | (2000) Mobile and Locomotive Cranes |

## NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

|          |   |
|----------|---|
| NFPA 10  | (2002) Portable Fire Extinguishers                                      |
| NFPA 241 | (2000) Safeguarding Construction, Alteration, and Demolition Operations |
| NFPA 51B | (2003) Fire Prevention During Welding, Cutting, and Other Hot Work      |
| NFPA 70  | (2002) National Electrical Code   |

## U.S. ARMY CORPS OF ENGINEERS (USACE)

|            |   |
|------------|---|
| EM 385-1-1 | (2003) Safety -- Safety and Health Requirements |
|------------|---|

## U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

|                 |  |
|-----------------|--|
| 29 CFR 1910.146 | Permit-required Confined Spaces                |
| 29 CFR 1926     | Safety and Health Regulations for Construction |
| 29 CFR 1926.500 | Fall Protection                                |

## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

Government acceptance is required for submittals with a "G, A" designation.

### SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G

Activity Hazard Analysis (AHA); G

Crane Critical Lift Plan; G

Proof of qualification for Crane Operators; G

### SD-06 Test Reports

#### Reports

Submit reports as their incidence occurs, in accordance with the requirements of the paragraph entitled, "Reports."

Accident Reports

Monthly Exposure Reports

Crane Reports

Regulatory Citations and Violations

### SD-07 Certificates

Confined Space Entry Permit

Hot work permit

## 1.3 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this contract, work performed shall comply with USACE EM 385-1-1, and the following federal, state, and local, laws, ordinances, criteria, rules and regulations. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply.

#### 1.4 SITE QUALIFICATIONS, DUTIES AND MEETINGS

##### 1.4.1 Personnel Qualifications

###### 1.4.1.1 Site Safety and Health Officer (SSHO)

Site Safety and Health Officer (SSHO) shall be provided at the work site at all times to perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The Contractor Quality Control (QC) person can be the SSHO on this project. The SSHO shall meet the following requirements:

###### Level 4:

A minimum of 10 years safety work of a progressive nature with at least 5 years of experience on similar projects.  
30-hour OSHA construction safety class or equivalent within the last 5 years.  
An average of at least 24 hours of formal safety training each year for the past 5 years with training for competent person status for at least the following 4 areas of competency:  
Excavation; Scaffolding; Fall protection; Confined space.

###### 1.4.1.2 Crane Operators

Crane operators shall meet the requirements in USACE EM 385-1-1, Section 16 and Appendix G. In addition, for mobile cranes with Original Equipment Manufacturer (OEM) rated capacities of 50,000 pounds or greater, crane operators shall be designated as qualified by a source that qualifies crane operators (i.e., union, a government agency, or an organization that tests and qualifies crane operators). Proof of current qualification shall be provided.

##### 1.4.2 Personnel Duties

###### 1.4.2.1 Site Safety and Health Officer (SSHO)/Superintendent

- a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Safety inspection logs shall be attached to the Contractors' daily quality control report.
- b. Conduct mishap investigations and complete required reports. Maintain the OSHA Form 300 and Daily Production reports for prime and sub-contractors.
- c. Maintain applicable safety reference material on the job site.
- d. Attend the pre-construction conference, pre-work meetings including preparatory inspection meeting, and periodic in-progress meetings.
- e. Implement and enforce accepted APPS and AHAs.
- f. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. A list of unresolved safety and health deficiencies shall be posted on the safety bulletin board.
- g. Ensure sub-contractor compliance with safety and health

requirements.

Failure to perform the above duties will result in dismissal of the superintendent and/or SSHO, and a project work stoppage. The project work stoppage will remain in effect pending approval of a suitable replacement.

#### 1.4.3 Meetings

##### 1.4.3.1 Preconstruction Conference

a. Contractor representatives who have a responsibility or significant role in accident prevention on the project shall attend the preconstruction conference. This includes the project superintendent, site safety and health officer, quality control supervisor, or any other assigned safety and health professionals who participated in the development of the APP (including the Activity Hazard Analyses (AHAs) and special plans, program and procedures associated with it).

b. The Contractor shall discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Contracting Officer's representative as to which phases will require an analysis. In addition, a schedule for the preparation, submittal, review, and acceptance of AHAs shall be established to preclude project delays.

c. Deficiencies in the submitted APP will be brought to the attention of the Contractor at the preconstruction conference, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Work shall not begin until there is an accepted APP.

d. The functions of a Preconstruction conference may take place at the Post-Award Kickoff meeting for Design Build Contracts.

##### 1.4.3.2 Safety Meetings

Shall be conducted and documented as required by EM 385-1-1. Minutes showing contract title, signatures of attendees and a list of topics discussed shall be attached to the Contractors' daily quality control report.

#### 1.5 ACCIDENT PREVENTION PLAN (APP)

The Contractor shall use a qualified person to prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of USACE EM 385-1-1 and as supplemented herein. Cover all paragraph and subparagraph elements in USACE EM 385-1-1, Appendix A, "Minimum Basic Outline for Accident Prevention Plan". Specific requirements for some of the APP elements are described below. The APP shall be job-specific and shall address any unusual or unique aspects of the project or activity for which it is written. The APP shall interface with the Contractor's overall safety and health program. Any portions of the Contractor's overall safety and health program referenced in the APP shall be included in the applicable APP element and made site-specific. The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions

under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP shall be signed by the person and firm (senior person) preparing the APP, the Contractor, the on-site superintendent, the designated site safety and health officer and any designated CSP and/or CIH.

Submit the APP to the Contracting Officer 15 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP.

Once accepted by the Contracting Officer, the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract or the accepted APP will be cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified.

Once work begins, changes to the accepted APP shall be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSSH and quality control manager. Should any hazard become evident, stop work in the area, secure the area, and develop a plan to remove the hazard. Notify the Contracting Officer within 24 hours of discovery. Eliminate/remove the hazard. In the interim, all necessary action shall be taken to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public (as defined by ANSI/ASSE A10.34,) and the environment.

Copies of the accepted plan will be maintained at the resident engineer's office and at the job site.

The APP shall be continuously reviewed and amended, as necessary, throughout the life of the contract. Unusual or high-hazard activities not identified in the original APP shall be incorporated in the plan as they are discovered.

#### 1.5.1 EM 385-1-1 Contents

In addition to the requirements outlines in Appendix A of USACE EM 385-1-1, the following is required:

a. Crane Critical Lift Plan. Prepare and sign weight handling critical lift plans for lifts over 75 percent of the capacity of the crane or hoist (or lifts over 50 percent of the capacity of a barge mounted mobile crane's hoists) at any radius of lift; lifts involving more than one crane or hoist; lifts of personnel; and lifts involving non-routine rigging or operation, sensitive equipment, or unusual safety risks. The plan shall be submitted 15 calendar days prior to on-site work and include the requirements of USACE EM 385-1-1, paragraph 16.C.18. and the following:

(1) For lifts of personnel, the plan shall demonstrate compliance with the requirements of 29 CFR 1926.550(g).

(2) For barge mounted mobile cranes, barge stability calculations identifying barge list and trim based on anticipated loading; and load charts based on calculated list and trim. The amount of list and trim shall be within the crane manufacturer's requirements.

b. Site Demolition Plan. The safety and health aspects prepared in accordance with Section 02220 DEMOLITION and referenced sources. Include engineering survey as applicable.

c. Excavation Plan. The safety and health aspects prepared in accordance with Section 02300S EARTHWORK. All suspected unexploded ordinance must be immediately reported to range safety Roy Griggs at (912) 767-7568.

#### 1.6 ACTIVITY HAZARD ANALYSIS (AHA)

The Activity Hazard Analysis (AHA) format shall be in accordance with USACE EM 385-1-1. Submit the AHA for review at least 15 calendar days prior to the start of each phase. Format subsequent AHAs as amendments to the APP. The analysis should be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.

The AHA list will be reviewed periodically (at least monthly) at the Contractor supervisory safety meeting and updated as necessary when procedures, scheduling, or hazards change.

The activity hazard analyses shall be developed using the project schedule as the basis for the activities performed. Any activities listed on the project schedule will require an AHA. The AHAs will be developed by the contractor, supplier or subcontractor and provided to the prime contractor for submittal to the Contracting Officer.

#### 1.7 DISPLAY OF SAFETY INFORMATION

Within 2 calendar days after commencement of work, erect a safety bulletin board at the job site. The safety bulletin board shall include information and be maintained as required by EM 385-1-1, section 01.A.06. Additional items required to be posted include:

- a. Confined space entry permit.
- b. Hot work permit.

#### 1.8 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in the article "References." Maintain applicable equipment manufacturer's manuals.

#### 1.9 EMERGENCY MEDICAL TREATMENT

Contractors will arrange for their own emergency medical treatment. Government has no responsibility to provide emergency medical treatment.

#### 1.10 REPORTS

##### 1.10.1 Accident Reports

- a. For recordable injuries and illnesses, and property damage accidents resulting in at least \$2,000 in damages, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the Navy Contractor Significant Incident Report (CSIR) form USACE Accident Report Form 3394 and provide the

report to the Contracting Officer within 5 calendar days of the accident. The Contracting Officer will provide copies of any required or special forms.

#### 1.10.2 Monthly Exposure Reports

Monthly exposure reporting to the Contracting Officer is required to be attached to the monthly billing request. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor. The Contracting Officer will provide copies of any special forms.

#### 1.10.3 Crane Reports

Submit crane inspection reports required in accordance with USACE EM 385-1-1, Appendix H and as specified herein with Daily Reports of Inspections.

#### 1.11 HOT WORK

Prior to performing "Hot Work" (welding, cutting, etc.) or operating other flame-producing/spark producing devices, a written permit shall be requested from the Fire Division. CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED. The Contractor will provide at least two (2) twenty (20) pound 4A:20 BC rated extinguishers for normal "Hot Work". All extinguishers shall be current inspection tagged, approved safety pin and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity. The Fire Watch shall be trained in accordance with NFPA 51B and remain on-site for a minimum of 30 minutes after completion of the task or as specified on the hot work permit.

When starting work in the facility, Contractors shall require their personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the emergency Fire Division phone number. ANY FIRE, NO MATTER HOW SMALL, SHALL BE REPORTED TO THE RESPONSIBLE FIRE DIVISION IMMEDIATELY.

#### PART 2 PRODUCTS

Not used.

#### 2.1 FALL PROTECTION ANCHORAGE

Fall protection anchorage, conforming to ANSI Z359.1, installed under the supervision of a qualified person in fall protection, shall be left in place for continued customer use and so identified by signage stating the capacity of the anchorage (strength and number of persons who may be tied-off to it at any one time).

#### PART 3 EXECUTION

#### 3.1 CONSTRUCTION AND/OR OTHER WORK

The Contractor shall comply with USACE EM 385-1-1, NFPA 241, the APP, the AHA, Federal and/or State OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard shall prevail.



### 3.1.1 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with USACE EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates, lead-based paint are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials.

### 3.1.2 Unforeseen Hazardous Material

The design should have identified materials such as PCB, lead paint, and friable and non-friable asbestos. If material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to "FAR 52.243-4, Changes" and "FAR 52.236-2, Differing Site Conditions."

## 3.2 PRE-OUTAGE COORDINATION MEETING

Contractors are required to apply for utility outages at least 15 days in advance. As a minimum, the request should include the location of the outage, utilities being affected, duration of outage and any necessary sketches. Special requirements for electrical outage requests are contained elsewhere in this specification section. Once approved, and prior to beginning work on the utility system requiring shut down, the Contractor shall attend a pre-outage coordination meeting with the Contracting Officer and the Installation representative to review the scope of work and the lock-out/tag-out procedures for worker protection. No work will be performed on energized electrical circuits unless proof is provided that no other means exist.

## 3.3 FALL HAZARD PROTECTION AND PREVENTION PROGRAM

The Contractor shall establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. The program shall include company policy, identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures.

### 3.3.1 Training

The Contractor shall institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, the Contractor shall provide training for each employee who might be exposed to fall hazards. A competent person for fall protection shall provide the training. Training requirements shall be in accordance with USACE EM 385-1-1, section 21.A.16.

### 3.3.2 Fall Protection Equipment and Systems

The Contractor shall enforce use of the fall protection equipment and systems designated for each specific work activity in the Fall Protection and Prevention Plan and/or AHA at all times when an employee is exposed to a fall hazard. Employees shall be protected from fall hazards as specified in EM 385-1-1, section 21. In addition to the required fall protection systems, safety skiff, personal floatation devices, life rings etc., are required when working above or next to water in accordance with USACE EM 385-1-1, paragraphs 05.H. and 05.I. Personal fall arrest systems are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall arrest systems are required when operating other equipment such as scissor lifts if the work platform is capable of being positioned outside the wheelbase. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, or travel. Fall protection must comply with 29 CFR 1926.500, Subpart M, USACE EM 385-1-1 and ANSI A10.32.

#### 3.3.2.1 Personal Fall Arrest Equipment

Personal fall arrest equipment, systems, subsystems, and components shall meet ANSI Z359.1. Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. Body belts may only be used as a positioning device system (for uses such as steel reinforcing assembly and in addition to an approved fall arrest system). Harnesses shall have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Only locking snap hooks and carabiners shall be used. Webbing, straps, and ropes shall be made of synthetic fiber. The maximum free fall distance when using fall arrest equipment shall not exceed 1.8 m (6 feet). The total fall distance and any swinging of the worker (pendulum-like motion) that can occur during a fall shall always be taken into consideration when attaching a person to a fall arrest system.

#### 3.3.3 Fall Protection for Roofing Work

Fall protection controls shall be implemented based on the type of roof being constructed and work being performed. The roof area to be accessed shall be evaluated for its structural integrity including weight-bearing capabilities for the projected loading.

##### a. Low Sloped Roofs:

(1) For work within 1.8 m (6 feet) of an edge, on low-slope roofs, personnel shall be protected from falling by use of personal fall arrest systems, guardrails, or safety nets.

(2) For work greater than 1.8 m (6 feet) from an edge, warning lines shall be erected and installed in accordance with 29 CFR 1926.500 and USACE EM 385-1-1.

b. Steep-Sloped Roofs: Work on steep-sloped roofs requires a personal fall arrest system, guardrails with toe-boards, or safety nets. This requirement also includes residential or housing type construction.

#### 3.3.4 Existing Anchorage

Existing anchorages, to be used for attachment of personal fall arrest equipment, shall be certified (or re-certified) by a qualified person for fall protection in accordance with ANSI Z359.1. Existing horizontal lifeline anchorages shall be certified (or re-certified) by a registered professional engineer with experience in designing horizontal lifeline systems.

#### 3.3.5 Horizontal Lifelines

Horizontal lifelines shall be designed, installed, certified and used under the supervision of a qualified person for fall protection as part of a complete fall arrest system which maintains a safety factor of 2 (29 CFR 1926.500).

#### 3.3.6 Guardrails and Safety Nets

Guardrails and safety nets shall be designed, installed and used in accordance with EM 385-1-1 and 29 CFR 1926 Subpart M.

#### 3.3.7 Rescue and Evacuation Procedures

When personal fall arrest systems are used, the contractor must ensure that the mishap victim can self-rescue or can be rescued promptly should a fall occur. A Rescue and Evacuation Plan shall be prepared by the contractor and include a detailed discussion of the following: methods of rescue; methods of self-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. The Rescue and Evacuation Plan shall be included in the Activity Hazard Analysis (AHA) for the phase of work, in the Fall Protection and Prevention (FP&P) Plan, and the Accident Prevention Plan (APP).

### 3.4 SCAFFOLDING

Employees shall be provided with a safe means of access to the work area on the scaffold. Climbing of any scaffold braces or supports not specifically designed for access is prohibited. Access to scaffold platforms greater than 6 m (20 feet) in height shall be accessed by use of a scaffold stair system. Vertical ladders commonly provided by scaffold system manufacturers shall not be used for accessing scaffold platforms greater than 6 m (20 feet) in height. The use of an adequate gate is required. Contractor shall ensure that employees are qualified to perform scaffold erection and dismantling. Do not use scaffold without the capability of supporting at least four times the maximum intended load or without appropriate fall protection as delineated in the accepted fall protection and prevention plan. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward. Special care shall be given to ensure scaffold systems are not overloaded. Side brackets used to extend scaffold platforms on self-supported scaffold systems for the storage of material is prohibited. The first tie-in shall be at the height equal to 4 times the width of the smallest dimension of the scaffold base. Work platforms shall be placed on mud sills. Scaffold or work platform erectors shall have fall protection during the erection and dismantling of scaffolding or work platforms that are more than six feet. Delineate fall protection requirements when working above six feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of work.

### 3.4.1 Stilts

The use of stilts for gaining additional height in construction, renovation, repair or maintenance work is prohibited.

## 3.5 EQUIPMENT

### 3.5.1 Material Handling Equipment

a. Material handling equipment such as forklifts shall not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.

b. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions.

c. Operators of forklifts or power industrial trucks shall be licensed in accordance with OSHA.

### 3.5.2 Weight Handling Equipment

a. Cranes and derricks shall be equipped as specified in EM 385-1-1, section 16.

b. The Contractor shall comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Erection shall be performed under the supervision of a designated person (as defined in ASME B30.5). All testing shall be performed in accordance with the manufacturer's recommended procedures.

c. Under no circumstance shall a Contractor make a lift at or above 90% of the cranes rated capacity in any configuration.

d. When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and shall follow the requirements of USACE EM 385-1-1 section 11 and ASME B30.5 or ASME B30.22 as applicable.

e. Crane suspended personnel work platforms (baskets) shall not be used unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Personnel shall not be lifted with a line hoist or friction crane.

f. Portable fire extinguishers shall be inspected, maintained, and recharged as specified in NFPA 10, Standard for Portable Fire Extinguishers.

g. All employees shall be kept clear of loads about to be lifted and of suspended loads.

h. The Contractor shall use cribbing when performing lifts on outriggers.

i. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.

j. A physical barricade must be positioned to prevent personnel from entering the counterweight swing (tail swing) area of the crane.

k. Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall always be available for review by Contracting Officer personnel.

l. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by Contracting Officer personnel.

m. Certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

### 3.6 EXCAVATIONS

The competent person shall perform soil classification in accordance with 29 CFR 1926.

#### 3.6.1 Utility Locations

Prior to digging, the appropriate digging permit must be obtained. All underground utilities in the work area must be positively identified by a private utility locating service in addition to any station locating service and coordinated with the station utility department. Any markings made during the utility investigation must be maintained throughout the contract.

#### 3.6.2 Utility Location Verification

The Contractor must physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of the underground system. Digging within 0.61 m (2 feet) of a known utility must not be performed by means of mechanical equipment; hand digging shall be used. If construction is parallel to an existing utility the utility shall be exposed by hand digging every 30.5 m (100 feet) if parallel within 1.5 m (5 feet) of the excavation.

#### 3.6.3 Shoring Systems

Trench and shoring systems must be identified in the accepted safety plan and AHA. Manufacture tabulated data and specifications or registered engineer tabulated data for shoring or benching systems shall be readily available on-site for review. Job-made shoring or shielding shall have the registered professional engineer stamp, specifications, and tabulated data.

Extreme care must be used when excavating near direct burial electric underground cables.

#### 3.6.4 Trenching Machinery

Trenching machines with digging chain drives shall be operated only when the spotters/laborers are in plain view of the operator. Operator and spotters/laborers shall be provided training on the hazards of the digging chain drives with emphasis on the distance that needs to be maintained when the digging chain is operating. Documentation of the training shall be kept on file at the project site.

### 3.7 UTILITIES WITHIN CONCRETE SLABS

Utilities located within concrete slabs or pier structures, bridges, and the like, are extremely difficult to identify due to the reinforcing steel used in the construction of these structures. Whenever contract work involves concrete chipping, saw cutting, or core drilling, the existing utility location must be coordinated with station utility departments in addition to a private locating service. Outages to isolate utility systems shall be used in circumstances where utilities are unable to be positively identified. The use of historical drawings does not alleviate the contractor from meeting this requirement.

### 3.8 ELECTRICAL

#### 3.8.1 Conduct of Electrical Work

All outages required shall be coordinated with Canoochee EMC and the Contracting Officer.

#### 3.8.2 Portable Extension Cords

Portable extension cords shall be sized in accordance with manufacturer ratings for the tool to be powered and protected from damage. All damaged extension cords shall be immediately removed from service. Portable extension cords shall meet the requirements of NFPA 70.

### 3.9 WORK IN CONFINED SPACES

The Contractor shall comply with the requirements in Section 06.I of USACE EM 385-1-1, OSHA 29 CFR 1910.146 and OSHA 29 CFR 1926.21(b)(6). Any potential for a hazard in the confined space requires a permit system to be used.

a. Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. (See Section 06.I.06 of USACE EM 385-1-1 for entry procedures.) All hazards pertaining to the space shall be reviewed with each employee during review of the AHA.

b. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained to ensure exposure to any hazardous atmosphere is kept below its' action level.

c. Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01572

CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

02/03

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## SECTION 01572

CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT  
02/03

## PART 1 GENERAL

## 1.1 GOVERNMENT POLICY

Government policy is to apply sound environmental principles in the design, construction and use of facilities. As part of the implementation of that policy the Contractor shall: (1) practice efficient waste management when sizing, cutting, and installing products and materials and (2) use all reasonable means to divert construction and demolition waste from landfills and incinerators and to facilitate their recycling or reuse.

## 1.2 MANAGEMENT

The Contractor shall take a pro-active, responsible role in the management of construction and demolition waste and require all subcontractors, vendors, and suppliers to participate in the effort. Construction and demolition waste includes products of demolition or removal, excess or unusable construction materials, packaging materials for construction products, and other materials generated during the construction process but not incorporated into the work. In the management of waste consideration shall be given to the availability of viable markets, the condition of the material, the ability to provide the material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal project completion mandates. The Contractor shall be responsible for implementation of any special programs involving rebates or similar incentives related to recycling of waste. Revenues or other savings obtained for salvage, or recycling shall accrue to the Contractor. Firms and facilities used for recycling, reuse, and disposal shall be appropriately permitted for the intended use to the extent required by federal, state, and local regulations.

## 1.3 PLAN

A waste management plan shall be submitted within 15 days after notice to proceed and prior to initiating any site preparation work. The plan shall include the following:

- a. Name of individuals on the Contractor's staff responsible for waste prevention and management.
- b. Actions that will be taken to reduce solid waste generation.
- c. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas and equipment to be used for processing, sorting, and temporary storage of wastes.
- d. Characterization, including estimated types and quantities, of the waste to be generated.
- e. Name of landfill and/or incinerator to be used and the estimated



costs for use, assuming that there would be no salvage or recycling on the project.

f. Identification of local and regional reuse programs, including non-profit organizations such as schools, local housing agencies, and organizations that accept used materials such as materials exchange networks and Habitat for Humanity.

g. List of specific waste materials that will be salvaged for resale, salvaged and reused, or recycled. Recycling facilities that will be used shall be identified.

h. Identification of materials that cannot be recycled/reused with an explanation or justification.

i. Anticipated net cost savings determined by subtracting Contractor program management costs and the cost of disposal from the revenue generated by sale of the materials and the incineration and/or landfill cost avoidance.

#### 1.4 RECORDS

Records shall be maintained to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed by landfill or incineration. The records shall be made available to the Contracting Officer during construction, and a copy of the records shall be delivered to the Contracting Officer upon completion of the construction.

#### 1.5 COLLECTION

The necessary containers, bins and storage areas to facilitate effective waste management shall be provided and shall be clearly and appropriately identified. Recyclable materials shall be handled to prevent contamination of materials from incompatible products and materials and separated by one of the following methods:

##### 1.5.1 Source Separated Method.

Waste products and materials that are recyclable shall be separated from trash and sorted into appropriately marked separate containers and then transported to the respective recycling facility for further processing.

##### 1.5.2 Co-Mingled Method.

Waste products and recyclable materials shall be placed into a single container and then transported to a recycling facility where the recyclable materials are sorted and processed.

##### 1.5.3 Other Methods.

Other methods proposed by the Contractor may be used when approved by the Contracting Officer.

#### 1.6 DISPOSAL

Except as otherwise specified in other sections of the specifications, disposal shall be in accordance with the following:

## 1.6.1 Reuse.

First consideration shall be given to salvage for reuse since little or no re-processing is necessary for this method, and less pollution is created when items are reused in their original form. Sale or donation of waste suitable for reuse shall be considered. Salvaged materials, other than those specified in other sections to be salvaged and reinstalled, shall not be used in this project.

## 1.6.2 Recycle.

Waste materials not suitable for reuse, but having value as being recyclable, shall be made available for recycling whenever economically feasible.

## 1.6.3 Waste.

Materials with no practical use or economic benefit shall be disposed at a landfill or incinerator.

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RECYCLED / RECOVERED MATERIALS

**12/01**

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## SECTION 01670

## RECYCLED / RECOVERED MATERIALS

12/01

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 247

Comprehensive Procurement Guideline for  
Products Containing Recovered Materials

## 1.2 OBJECTIVES

Government procurement policy is to acquire, in a cost effective manner, items containing the highest percentage of recycled and recovered materials practicable consistent with maintaining a satisfactory level of competition without adversely affecting performance requirements or exposing suppliers' employees to undue hazards from the recovered materials. The Environmental Protection Agency (EPA) has designated certain items which must contain a specified percent range of recovered or recycled materials. EPA designated products specified in this contract comply with the stated policy and with the EPA guidelines. The Contractor shall make all reasonable efforts to use recycled and recovered materials in providing the EPA designated products and in otherwise utilizing recycled and recovered materials in the execution of the work.

## 1.3 EPA DESIGNATED ITEMS INCORPORATED IN THE WORK

Various sections of the specifications contain requirements for materials that have been designated by EPA as being products which are or can be made with recovered or recycled materials. These items, when incorporated into the work under this contract, shall contain at least the specified percentage of recycled or recovered materials unless adequate justification (non-availability) for non-use is provided. When a designated item is specified as an option to a non-designated item, the designated item requirements apply only if the designated item is used in the work.

## 1.4 EPA PROPOSED ITEMS INCORPORATED IN THE WORK

Products other than those designated by EPA are still being researched and are being considered for future Comprehensive Procurement Guideline (CPG) designation. It is recommended that these items, when incorporated in the work under this contract, contain the highest practicable percentage of recycled or recovered materials, provided specified requirements are also met.

#### 1.5 EPA LISTED ITEMS USED IN CONDUCT OF THE WORK BUT NOT INCORPORATED IN THE WORK

There are many products listed in 40 CFR 247 which have been designated or proposed by EPA to include recycled or recovered materials that may be used by the Contractor in performing the work but will not be incorporated into the work. These products include office products, temporary traffic control products, and pallets. It is recommended that these non-construction products, when used in the conduct of the work, contain the highest practicable percentage of recycled or recovered materials and that these products be recycled when no longer needed.

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## SECTION 01780A

## CLOSEOUT SUBMITTALS

05/02

## PART 1 GENERAL

## 1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

## SD-02 Shop Drawings

## As-Built Drawings

Drawings showing final as-built conditions of the project. The final CADD as-built drawings shall consist of one set of electronic CADD drawing files in the specified format, 2 sets of blue-line prints, and one set of the approved working as-built drawings.

## SD-03 Product Data

## As-Built Record of Equipment and Materials

Two copies of the record listing the as-built materials and equipment incorporated into the construction of the project.

## Warranty Management Plan

One set of the warranty management plan containing information relevant to the warranty of materials and equipment incorporated into the construction project, including the starting date of warranty of construction. The Contractor shall furnish with each warranty the name, address, and telephone number of each of the guarantor's representatives nearest to the project location.

## Warranty Tags

Two record copies of the warranty tags showing the layout and design.

## Final Cleaning

Two copies of the listing of completed final clean-up items.

## 1.2 PROJECT RECORD DOCUMENTS

## 1.2.1 As-Built Drawings

This paragraph covers as-built drawings complete, as a requirement of the

contract. The terms "drawings," "contract drawings," "drawing files," "working as-built drawings" and "final as-built drawings" refer to contract drawings which are revised to be used for final as-built drawings.

#### 1.2.1.1 Government Furnished Materials

One set of electronic CADD files in the specified software and format revised to reflect all bid amendments will be provided by the Government at the preconstruction conference for projects requiring CADD file as-built drawings.

#### 1.2.1.2 Working As-Built and Final As-Built Drawings

The Contractor shall revise 2 sets of paper drawings by red-line process to show the as-built conditions during the prosecution of the project. These working as-built marked drawings shall be kept current on a weekly basis and at least one set shall be available on the jobsite at all times. Changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes.

Final as-built drawings shall be prepared after the completion of each definable feature of work as listed in the Contractor Quality Control Plan (Foundations, Utilities, Structural Steel, etc., as appropriate for the project). The working as-built marked prints and final as-built drawings will be jointly reviewed for accuracy and completeness by the Contracting Officer and the Contractor prior to submission of each monthly pay estimate. If the Contractor fails to maintain the working and final as-built drawings as specified herein, the Contracting Officer will deduct from the monthly progress payment an amount representing the estimated cost of maintaining the as-built drawings. This monthly deduction will continue until an agreement can be reached between the Contracting Officer and the Contractor regarding the accuracy and completeness of updated drawings. The working and final as-built drawings shall show, but shall not be limited to, the following information:

a. The actual location, kinds and sizes of all sub-surface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, the as-built drawings shall show, by offset dimensions to two permanently fixed surface features, the end of each run including each change in direction. Valves, splice boxes and similar appurtenances shall be located by dimensioning along the utility run from a reference point. The average depth below the surface of each run shall also be recorded.

b. The location and dimensions of any changes within the building structure.

c. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.

d. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

e. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.



- f. Changes or modifications which result from the final inspection.
- g. Where contract drawings or specifications present options, only the option selected for construction shall be shown on the final as-built prints.
- h. If borrow material for this project is from sources on Government property, or if Government property is used as a spoil area, the Contractor shall furnish a contour map of the final borrow pit/spoil area elevations.
- i. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.
- j. Modifications (change order price shall include the Contractor's cost to change working and final as-built drawings to reflect modifications) and compliance with the following procedures.
  - (1) Directions in the modification for posting descriptive changes shall be followed.
  - (2) A Modification Circle shall be placed at the location of each deletion.
  - (3) For new details or sections which are added to a drawing, a Modification Circle shall be placed by the detail or section title.
  - (4) For minor changes, a Modification Circle shall be placed by the area changed on the drawing (each location).
  - (5) For major changes to a drawing, a Modification Circle shall be placed by the title of the affected plan, section, or detail at each location.
  - (6) For changes to schedules or drawings, a Modification Circle shall be placed either by the schedule heading or by the change in the schedule.
  - (7) The Modification Circle size shall be 1/2 inch diameter unless the area where the circle is to be placed is crowded. Smaller size circle shall be used for crowded areas.

#### 1.2.1.3 Drawing Preparation

The as-built drawings shall be modified as may be necessary to correctly show the features of the project as it has been constructed by bringing the contract set into agreement with approved working as-built prints, and adding such additional drawings as may be necessary. These working as-built marked prints shall be neat, legible and accurate. These drawings are part of the permanent records of this project and shall be returned to the Contracting Officer after approval by the Government. Any drawings damaged or lost by the Contractor shall be satisfactorily replaced by the Contractor at no expense to the Government.

#### 1.2.1.4 Computer Aided Design and Drafting (CADD) Drawings

Only personnel proficient in the preparation of CADD drawings shall be employed to modify the contract drawings or prepare additional new drawings. Additions and corrections to the contract drawings shall be

equal in quality and detail to that of the originals. Line colors, line weights, lettering, layering conventions, and symbols shall be the same as the original line colors, line weights, lettering, layering conventions, and symbols. If additional drawings are required, they shall be prepared using the specified electronic file format applying the same graphic standards specified for original drawings. The title block and drawing border to be used for any new final as-built drawings shall be identical to that used on the contract drawings. Additions and corrections to the contract drawings shall be accomplished using CADD files. The Contractor will be furnished "as-designed" drawings in Microstation 8.0 format compatible with a Windows NT operating system. The electronic files will be supplied on compact disc, read-only memory (CD-ROM). The Contractor shall be responsible for providing all program files and hardware necessary to prepare final as-built drawings. The Contracting Officer will review final as-built drawings for accuracy and the Contractor shall make required corrections, changes, additions, and deletions.

a. CADD colors shall be the "base" colors of red, green, and blue. Color code for changes shall be as follows:

- (1) Deletions (red) - Deleted graphic items (lines) shall be colored red with red lettering in notes and leaders.
- (2) Additions (Green) - Added items shall be drawn in green with green lettering in notes and leaders.
- (3) Special (Blue) - Items requiring special information, coordination, or special detailing or detailing notes shall be in blue.

b. The Contract Drawing files shall be renamed in a manner related to the contract number (i.e., 98-C-10.DGN) as instructed in the Pre-Construction conference. Marked-up changes shall be made only to those renamed files. All changes shall be made on the layer/level as the original item. There shall be no deletions of existing lines; existing lines shall be over struck in red. Additions shall be in green with line weights the same as the drawing. Special notes shall be in blue on layer #63.

c. When final revisions have been completed, the cover sheet drawing shall show the wording "RECORD DRAWING AS-BUILT" followed by the name of the Contractor in letters at least 3/16 inch high. All other contract drawings shall be marked either "AS-Built" drawing denoting no revisions on the sheet or "Revised As-Built" denoting one or more revisions. Original contract drawings shall be dated in the revision block.

d. Within 45 days for contracts less than \$5 million after Government approval of all of the working as-built drawings for a phase of work, the Contractor shall prepare the final CADD as-built drawings for that phase of work and submit two sets of blue-lined prints of these drawings for Government review and approval. The Government will promptly return one set of prints annotated with any necessary corrections. Within 20 days for contracts less than \$5 million the Contractor shall revise the CADD files accordingly at no additional cost and submit one set of final prints for the completed phase of work to the Government. Within 20 days for contracts less than \$5 million of substantial completion of all phases of work, the Contractor shall submit the final as-built drawing package for the entire project. The submittal shall consist of one set of electronic files on compact disc, read-only memory (CD-ROM), two sets of blue-line

prints and one set of the approved working as-built drawings. They shall be complete in all details and identical in form and function to the contract drawing files supplied by the Government. Any transactions or adjustments necessary to accomplish this is the responsibility of the Contractor. The Government reserves the right to reject any drawing files it deems incompatible with the customer's CADD system. Paper prints, drawing files and storage media submitted will become the property of the Government upon final approval. Failure to submit final as-built drawing files and marked prints as specified shall be cause for withholding any payment due the Contractor under this contract. Approval and acceptance of final as-built drawings shall be accomplished before final payment is made to the Contractor.

#### 1.2.1.5 Payment

No separate payment will be made for as-built drawings required under this contract, and all costs accrued in connection with such drawings shall be considered a subsidiary obligation of the Contractor.

#### 1.2.2 As-Built Record of Equipment and Materials

The Contractor shall furnish one copy of preliminary record of equipment and materials used on the project 15 days prior to final inspection. This preliminary submittal will be reviewed and returned 2 days after final inspection with Government comments. Two sets of final record of equipment and materials shall be submitted 10 days after final inspection. The designations shall be keyed to the related area depicted on the contract drawings. The record shall list the following data:

##### RECORD OF DESIGNATED EQUIPMENT AND MATERIALS DATA

| Description | Specification<br>Section | Manufacturer<br>and Catalog,<br>Model, and<br>Serial Number | Composition<br>and Size | Where<br>Used |
|-------------|--------------------------|---|-------------------------|---------------|
|-------------|--------------------------|---|-------------------------|---------------|

#### 1.2.3 Final Approved Shop Drawings

The Contractor shall furnish final approved project shop drawings 30 days after transfer of the completed facility.

#### 1.2.4 Construction Contract Specifications

The Contractor shall furnish final as-built construction contract specifications, including modifications thereto, 30 days after transfer of the completed facility.

#### 1.2.5 Real Property Equipment

The Contractor shall furnish a list of installed equipment furnished under this contract. The list shall include all information usually listed on manufacturer's name plate. The "EQUIPMENT-IN-PLACE LIST" shall include, as applicable, the following for each piece of equipment installed: description of item, location (by room number), model number, serial number, capacity, name and address of manufacturer, name and address of equipment supplier, condition, spare parts list, manufacturer's catalog, and warranty. A draft list shall be furnished at time of transfer. The final list shall be furnished 30 days after transfer of the completed facility.

### 1.3 WARRANTY MANAGEMENT

#### 1.3.1 Warranty Management Plan

The Contractor shall develop a warranty management plan which shall contain information relevant to the clause Warranty of Construction. At least 30 days before the planned pre-warranty conference, the Contractor shall submit the warranty management plan for Government approval. The warranty management plan shall include all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan shall be in narrative form and contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this contract. The term "status" as indicated below shall include due date and whether item has been submitted or was accomplished. Warranty information made available during the construction phase shall be submitted to the Contracting Officer for approval prior to each monthly pay estimate. Approved information shall be assembled in a binder and shall be turned over to the Government upon acceptance of the work. The construction warranty period shall begin on the date of project acceptance and shall continue for the full product warranty period. A joint 4 month and 9 month warranty inspection shall be conducted, measured from time of acceptance, by the Contractor, Contracting Officer and the Customer Representative. Information contained in the warranty management plan shall include, but shall not be limited to, the following:

- a. Roles and responsibilities of all personnel associated with the warranty process, including points of contact and telephone numbers within the organizations of the Contractors, subcontractors, manufacturers or suppliers involved.
- b. Listing and status of delivery of all Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers, and for all commissioned systems such as fire protection and alarm systems, sprinkler systems, lightning protection systems, etc.
- c. A list for each warranted equipment, item, feature of construction or system indicating:
  1. Name of item.
  2. Model and serial numbers.
  3. Location where installed.
  4. Name and phone numbers of manufacturers or suppliers.
  5. Names, addresses and telephone numbers of sources of spare parts.
  6. Warranties and terms of warranty. This shall include one-year overall warranty of construction. Items which have extended warranties shall be indicated with separate warranty expiration dates.
  7. Cross-reference to warranty certificates as applicable.
  8. Starting point and duration of warranty period.
  9. Summary of maintenance procedures required to continue the warranty in force.
  10. Cross-reference to specific pertinent Operation and Maintenance manuals.
  11. Organization, names and phone numbers of persons to call for warranty service.
  12. Typical response time and repair time expected for various

warranted equipment.

d. The Contractor's plans for attendance at the 4 and 9 month post-construction warranty inspections conducted by the Government.

e. Procedure and status of tagging of all equipment covered by extended warranties.

f. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

#### 1.3.2 Performance Bond

The Contractor's Performance Bond shall remain effective throughout the construction period.

a. In the event the Contractor fails to commence and diligently pursue any construction warranty work required, the Contracting Officer will have the work performed by others, and after completion of the work, will charge the remaining construction warranty funds of expenses incurred by the Government while performing the work, including, but not limited to administrative expenses.

b. In the event sufficient funds are not available to cover the construction warranty work performed by the Government at the Contractor's expense, the Contracting Officer will have the right to recoup expenses from the bonding company.

c. Following oral or written notification of required construction warranty repair work, the Contractor shall respond in a timely manner. Written verification will follow oral instructions. Failure of the Contractor to respond will be cause for the Contracting Officer to proceed against the Contractor.

#### 1.3.3 Pre-Warranty Conference

Prior to contract completion, and at a time designated by the Contracting Officer, the Contractor shall meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this section. Communication procedures for Contractor notification of construction warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty shall be established/reviewed at this meeting. In connection with these requirements and at the time of the Contractor's quality control completion inspection, the Contractor shall furnish the name, telephone number and address of a licensed and bonded company which is authorized to initiate and pursue construction warranty work action on behalf of the Contractor. This point of contact will be located within the local service area of the warranted construction, shall be continuously available, and shall be responsive to Government inquiry on warranty work action and status. This requirement does not relieve the Contractor of any of its responsibilities in connection with other portions of this provision.

#### 1.3.4 Contractor's Response to Construction Warranty Service Requirements

Following oral or written notification by the Contracting Officer, the Contractor shall respond to construction warranty service requirements in accordance with the "Construction Warranty Service Priority List" and the

three categories of priorities listed below. The Contractor shall submit a report on any warranty item that has been repaired during the warranty period. The report shall include the cause of the problem, date reported, corrective action taken, and when the repair was completed. If the Contractor does not perform the construction warranty within the timeframes specified, the Government will perform the work and backcharge the construction warranty payment item established.

a. First Priority Code 1. Perform onsite inspection to evaluate situation, and determine course of action within 4 hours, initiate work within 6 hours and work continuously to completion or relief.

b. Second Priority Code 2. Perform onsite inspection to evaluate situation, and determine course of action within 8 hours, initiate work within 24 hours and work continuously to completion or relief.

c. Third Priority Code 3. All other work to be initiated within 3 work days and work continuously to completion or relief.

d. The "Construction Warranty Service Priority List" is as follows:

Code 1-Air Conditioning Systems

- (1) Recreational support.
- (2) Air conditioning leak in part of building, if causing damage.
- (3) Air conditioning system not cooling properly.

Code 1-Doors

- (1) Overhead doors not operational, causing a security, fire, or safety problem.
- (2) Interior, exterior personnel doors or hardware, not functioning properly, causing a security, fire, or safety problem.

Code 3-Doors

- (1) Overhead doors not operational.
- (2) Interior/exterior personnel doors or hardware not functioning properly.

Code 1-Electrical

- (1) Power failure (entire area or any building operational after 1600 hours).
- (2) Security lights
- (3) Smoke detectors

Code 2-Electrical

- (1) Power failure (no power to a room or part of building).
- (2) Receptacle and lights (in a room or part of building).

Code 1-Gas

- (1) Leaks and breaks.
- (2) No gas to family housing unit or cantonment area.

Code 1-Heat

- (1). Area power failure affecting heat.
- (2). Heater in unit not working.

Code 2-Kitchen Equipment

- (1) Dishwasher not operating properly.
- (2) All other equipment hampering preparation of a meal.

## Code 1-Plumbing

- (1) Hot water heater failure.
- (2) Leaking water supply pipes.

## Code 2-Plumbing

- (1) Flush valves not operating properly.
- (2) Fixture drain, supply line to commode, or any water pipe leaking.
- (3) Commode leaking at base.

## Code 3 -Plumbing

Leaky faucets.

## Code 3-Interior

- (1) Floors damaged.
- (2) Paint chipping or peeling.
- (3) Casework.

## Code 1-Roof Leaks

Temporary repairs will be made where major damage to property is occurring.

## Code 2-Roof Leaks

Where major damage to property is not occurring, check for location of leak during rain and complete repairs on a Code 2 basis.

## Code 2-Water (Exterior)

No water to facility.

## Code 2-Water (Hot)

No hot water in portion of building listed.

## Code 3-All other work not listed above.

## 1.3.5 Warranty Tags

At the time of installation, each warranted item shall be tagged with a durable, oil and water resistant tag approved by the Contracting Officer. Each tag shall be attached with a copper wire and shall be sprayed with a silicone waterproof coating. The date of acceptance and the QC signature shall remain blank until project is accepted for beneficial occupancy. The tag shall show the following information.

- a. Type of product/material\_\_\_\_\_.
- b. Model number\_\_\_\_\_.
- c. Serial number\_\_\_\_\_.
- d. Contract number\_\_\_\_\_.
- e. Warranty period\_\_\_\_\_from\_\_\_\_\_to\_\_\_\_\_.
- f. Inspector's signature\_\_\_\_\_.
- g. Construction Contractor\_\_\_\_\_.
- Address\_\_\_\_\_.

Telephone number\_\_\_\_\_.

h. Warranty contact\_\_\_\_\_.

Address\_\_\_\_\_.

Telephone number\_\_\_\_\_.

i. Warranty response time priority code\_\_\_\_\_.

j. WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.

#### 1.4 MECHANICAL TESTING, ADJUSTING, BALANCING, AND COMMISSIONING

Prior to final inspection and transfer of the completed facility; all reports, statements, certificates, and completed checklists for testing, adjusting, balancing, and commissioning of mechanical systems shall be submitted to and approved by the Contracting Officer as specified in applicable technical specification sections.

#### 1.5 OPERATION AND MAINTENANCE MANUALS

Operation manuals and maintenance manuals shall be submitted as specified. Operation manuals and maintenance manuals provided in a common volume shall be clearly differentiated and shall be separately indexed.

#### 1.6 FINAL CLEANING

The premises shall be left broom clean. Stains, foreign substances, and temporary labels shall be removed from surfaces. Carpet and soft surfaces shall be vacuumed. Equipment and fixtures shall be cleaned to a sanitary condition. Filters of operating equipment shall be replaced. Debris shall be removed from roofs, drainage systems, gutters, and downspouts. Paved areas shall be swept and landscaped areas shall be raked clean. The site shall have waste, surplus materials, and rubbish removed. The project area shall have temporary structures, barricades, project signs, fences and construction facilities removed. A list of completed clean-up items shall be submitted on the day of final inspection.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

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## SECTION 01781

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12/01

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## SECTION 01781

OPERATION AND MAINTENANCE DATA  
12/01

## PART 1 GENERAL

## 1.1 SUBMISSION OF OPERATION AND MAINTENANCE DATA

Submit Operation and Maintenance (O&M) Data specifically applicable to this contract and a complete and concise depiction of the provided equipment, product, or system. Organize and present information in sufficient detail to clearly explain O&M requirements at the system, equipment, component, and subassembly level. Include an index preceding each submittal. Submit in accordance with this section and Section 01330 SUBMITTAL PROCEDURES.

## 1.1.1 Package Quality

Documents must be fully legible. Poor quality copies and material with hole punches obliterating the text or drawings will not be accepted.

## 1.1.2 Package Content

Data package content shall be as shown in the paragraph titled "Schedule of Operation and Maintenance Data Packages." Comply with the data package requirements specified in the individual technical sections, including the content of the packages and addressing each product, component, and system designated for data package submission.

## 1.1.3 Changes to Submittals

Manufacturer-originated changes or revisions to submitted data shall be furnished by the Contractor if a component of an item is so affected subsequent to acceptance of the O&M Data. Changes, additions, or revisions required by the Contracting Officer for final acceptance of submitted data, shall be submitted by the Contractor within 30 calendar days of the notification of this change requirement.

## 1.2 TYPES OF INFORMATION REQUIRED IN O&amp;M DATA PACKAGES

## 1.2.1 Operating Instructions

Include specific instructions, procedures, and illustrations for the following phases of operation:

## 1.2.1.1 Safety Precautions

List personnel hazards and equipment or product safety precautions for all operating conditions.

## 1.2.1.2 Operator Prestart

Include procedures required to set up and prepare each system for use.

## 1.2.1.3 Startup, Shutdown, and Post-Shutdown Procedures

Provide narrative description for Startup, Shutdown and Post-shutdown

operating procedures including the control sequence for each procedure.

#### 1.2.1.4 Normal Operations

Provide narrative description of Normal Operating Procedures. Include Control Diagrams with data to explain operation and control of systems and specific equipment.

#### 1.2.1.5 Emergency Operations

Include Emergency Procedures for equipment malfunctions to permit a short period of continued operation or to shut down the equipment to prevent further damage to systems and equipment. Include Emergency Shutdown Instructions for fire, explosion, spills, or other foreseeable contingencies. Provide guidance and procedures for emergency operation of all utility systems including required valve positions, valve locations and zones or portions of systems controlled.

#### 1.2.1.6 Operator Service Requirements

Include instructions for services to be performed by the operator such as lubrication, adjustment, inspection, and recording gage readings.

#### 1.2.1.7 Environmental Conditions

Include a list of Environmental Conditions (temperature, humidity, and other relevant data) that are best suited for the operation of each product, component or system. Describe conditions under which the item equipment should not be allowed to run.

### 1.2.2 Preventive Maintenance

Include the following information for preventive and scheduled maintenance to minimize corrective maintenance and repair.

#### 1.2.2.1 Lubrication Data

Include preventative maintenance lubrication data, in addition to instructions for lubrication provided under paragraph titled "Operator Service Requirements":

- a. A table showing recommended lubricants for specific temperature ranges and applications.
- b. Charts with a schematic diagram of the equipment showing lubrication points, recommended types and grades of lubricants, and capacities.
- c. A Lubrication Schedule showing service interval frequency.

#### 1.2.2.2 Preventive Maintenance Plan and Schedule

Include manufacturer's schedule for routine preventive maintenance, inspections, tests and adjustments required to ensure proper and economical operation and to minimize corrective maintenance. Provide manufacturer's projection of preventive maintenance work-hours on a daily, weekly, monthly, and annual basis including craft requirements by type of craft. For periodic calibrations, provide manufacturer's specified frequency and procedures for each separate operation.

### 1.2.3 Corrective Maintenance (Repair)

Include manufacturer's recommended procedures and instructions for correcting problems and making repairs.

#### 1.2.3.1 Troubleshooting Guides and Diagnostic Techniques

Include step-by-step procedures to promptly isolate the cause of typical malfunctions. Describe clearly why the checkout is performed and what conditions are to be sought. Identify tests or inspections and test equipment required to determine whether parts and equipment may be reused or require replacement.

#### 1.2.3.2 Wiring Diagrams and Control Diagrams

Wiring diagrams and control diagrams shall be point-to-point drawings of wiring and control circuits including factory-field interfaces. Provide a complete and accurate depiction of the actual job specific wiring and control work. On diagrams, number electrical and electronic wiring and pneumatic control tubing and the terminals for each type, identically to actual installation configuration and numbering.

#### 1.2.3.3 Maintenance and Repair Procedures

Include instructions and a list of tools required to repair or restore the product or equipment to proper condition or operating standards.

#### 1.2.3.4 Removal and Replacement Instructions

Include step-by-step procedures and a list required tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings and adjustments required. Instructions shall include a combination of text and illustrations.

#### 1.2.3.5 Spare Parts and Supply Lists

Include lists of spare parts and supplies required for maintenance and repair to ensure continued service or operation without unreasonable delays. Special consideration is required for facilities at remote locations. List spare parts and supplies that have a long lead-time to obtain.

### 1.2.4 Corrective Maintenance Work-Hours

Include manufacturer's projection of corrective maintenance work-hours including requirements by type of craft. Corrective maintenance that requires completion or participation of the equipment manufacturer shall be identified and tabulated separately.

### 1.2.5 Appendices

Provide information required below and information not specified in the preceding paragraphs but pertinent to the maintenance or operation of the product or equipment. Include the following:

### 1.2.6 Parts Identification

Provide identification and coverage for all parts of each component, assembly, subassembly, and accessory of the end items subject to replacement. Include special hardware requirements, such as requirement to use high-strength bolts and nuts. Identify parts by make, model, serial number, and source of supply to allow reordering without further identification. Provide clear and legible illustrations, drawings, and exploded views to enable easy identification of the items. When illustrations omit the part numbers and description, both the illustrations and separate listing shall show the index, reference, or key number that will cross-reference the illustrated part to the listed part. Parts shown in the listings shall be grouped by components, assemblies, and subassemblies in accordance with the manufacturer's standard practice. Parts data may cover more than one model or series of equipment, components, assemblies, subassemblies, attachments, or accessories, such as typically shown in a master parts catalog

#### 1.2.6.1 Warranty Information

List and explain the various warranties and include the servicing and technical precautions prescribed by the manufacturers or contract documents in order to keep warranties in force. Include warranty information for primary components such as the compressor of air conditioning system.

#### 1.2.6.2 Personnel Training Requirements

Provide information available from the manufacturers that is needed for use in training designated personnel to properly operate and maintain the equipment and systems.

#### 1.2.6.3 Testing Equipment and Special Tool Information

Include information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components.

#### 1.2.6.4 Contractor Information

Provide a list that includes the name, address, and telephone number of the General Contractor and each Subcontractor who installed the product or equipment, or system. For each item, also provide the name address and telephone number of the manufacturer's representative and service organization most convenient to the project site. Provide the name, address, and telephone number of the product, equipment, and system manufacturers.

### 1.3 SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES

Furnish the O&M data packages specified in individual technical sections. The required information for each O&M data package is as follows:

#### 1.3.1 Data Package 1

- a. Safety precautions
- b. Maintenance and repair procedures
- c. Warranty information

- d. Contractor information
- e. Spare parts and supply list

#### 1.3.2 Data Package 2

- a. Safety precautions
- b. Normal operations
- c. Environmental conditions
- d. Lubrication data
- e. Preventive maintenance plan and schedule
- f. Maintenance and repair procedures
- g. Removal and replacement instructions
- h. Spare parts and supply list
- i. Parts identification
- j. Warranty information
- k. Contractor information

#### 1.3.3 Data Package 3

- a. Safety precautions
- b. Normal operations
- c. Emergency operations
- d. Environmental conditions
- e. Lubrication data
- f. Preventive maintenance plan and schedule
- g. Troubleshooting guides and diagnostic techniques
- h. Wiring diagrams and control diagrams
- i. Maintenance and repair procedures
- j. Removal and replacement instructions
- k. Spare parts and supply list
- l. Parts identification
- m. Warranty information
- n. Testing equipment and special tool information

- o. Contractor information

#### 1.3.4 Data Package 4

- a. Safety precautions
- b. Operator prestart
- c. Startup, shutdown, and post-shutdown procedures
- d. Normal operations
- e. Emergency operations
- f. Operator service requirements
- g. Environmental conditions
- h. Lubrication data
- i. Preventive maintenance plan and schedule
- j. Troubleshooting guides and diagnostic techniques
- k. Wiring diagrams and control diagrams
- l. Maintenance and repair procedures
- m. Removal and replacement instructions
- n. Spare parts and supply list
- o. Corrective maintenance man-hours
- p. Parts identification
- q. Warranty information
- r. Personnel training requirements
- s. Testing equipment and special tool information
- t. Contractor information

#### 1.3.5 Data Package 5

- a. Safety precautions
- b. Operator prestart
- c. Start-up, shutdown, and post-shutdown procedures
- d. Normal operations
- e. Environmental conditions
- f. Preventive maintenance plan and schedule
- g. Troubleshooting guides and diagnostic techniques

- h. Wiring and control diagrams
- i. Maintenance and repair procedures
- j. Spare parts and supply list
- k. Testing equipments and special tools
- l. Warranty information
- m. Contractor information

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --



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## SECTION 02220

## DEMOLITION

11/04

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- 3.3 DISPOSAL OF REMOVED MATERIALS
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-- End of Section Table of Contents --

## SECTION 02220

## DEMOLITION

**11/04**

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

## AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A10.6 (1990; R 1998) Safety Requirements for  
Demolition Operations

## U.S. ARMY CORPS OF ENGINEERS (USACE)

COE EM 385-1-1 (2003) Safety -- Safety and Health  
Requirements

## U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 61-SUBPART M National Emission Standard for Asbestos

## 1.2 GENERAL REQUIREMENTS

Do not begin demolition until authorization is received from the Contracting Officer. Remove rubbish and debris from the project site; do not allow accumulations. The work includes demolition, salvage of identified items and materials, and removal of resulting rubbish and debris. Remove rubbish and debris from Government property daily, unless otherwise directed. Materials that cannot be removed daily shall be stored in areas specified by the Contracting Officer. In the interest of occupational safety and health, perform the work in accordance with COE EM 385-1-1, Section 23, Demolition, and other applicable Sections. All suspected unexploded ordinance must be immediately reported to range safety Roy Griggs at (912) 767-7568.

## 1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

## SD-07 Certificates

Demolition plan  
Notifications

## 1.4 REGULATORY AND SAFETY REQUIREMENTS

Comply with federal, state, and local hauling and disposal regulations. In

addition to the requirements of the "Contract Clauses," conform to the safety requirements contained in ANSI A10.6.

#### 1.4.1 Notifications

##### 1.4.1.1 General Requirements

Furnish timely notification of demolition projects to Federal, State, regional, and local authorities in accordance with 40 CFR 61-SUBPART M.

#### 1.5 DUST AND DEBRIS CONTROL

Prevent the spread of dust and debris to occupied portions of the site and avoid the creation of a nuisance or hazard in the surrounding area. Do not use water if it results in hazardous or objectionable conditions such as, but not limited to, ice, flooding, or pollution.

#### 1.6 PROTECTION

##### 1.6.1 Traffic Control Signs

Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades with flashing lights. Notify the Contracting Officer prior to beginning such work.

##### 1.6.2 Existing Work

Before beginning any demolition work, survey the site and examine the drawings and specifications to determine the extent of the work. Record existing work in the presence of the Contracting Officer showing the condition of structures and other facilities adjacent to areas of alteration or removal. Photographs sized 4 inch will be acceptable as a record of existing conditions. Include in the record the elevation of the top of foundation walls, the location and extent of cracks and other damage and description of surface conditions that exist prior to starting work.

##### 1.6.3 Items to Remain in Place

Take necessary precautions to avoid damage to existing items to remain in place, to be reused, or to remain the property of the Government. Repair or replace damaged items as approved by the Contracting Officer. Coordinate the work of this section with all other work indicated. Construct and maintain shoring, bracing, and supports as required. Ensure that structural elements are not overloaded. Increase structural supports or add new supports as may be required as a result of any cutting, removal, or demolition work performed under this contract. Do not overload pavements to remain. Repairs require approval by the Contracting Officer prior to performing such work.

##### 1.6.4 Existing Construction

Do not disturb existing construction beyond the extent indicated or necessary for installation of new construction. Provide protective measures to control accumulation and migration of dust and dirt in all work areas.

##### 1.6.5 Trees

Protect trees within the project site which might be damaged during

demolition, and which are indicated to be left in place, by a 6 foot high fence. Erect and secure fence a minimum of 5 feet from the trunk of individual trees or follow the outer perimeter of branches or clumps of trees. Replace any tree designated to remain that is damaged during the work under this contract with like-kind or as approved by the Contracting Officer.

#### 1.6.6 Utility Service

Maintain existing utilities indicated to stay in service and protect against damage during demolition operations. Prior to start of work, utilities serving each area of alteration or removal will be shut off by the Government and disconnected and sealed by the Contractor.

#### 1.6.7 Facilities

Protect electrical and mechanical services and utilities. Where removal of existing utilities and pavement is specified or indicated, provide approved barricades, temporary covering of exposed areas, and temporary services or connections for electrical and mechanical utilities.

#### 1.7 BURNING

The use of burning at the project site for the disposal of refuse and debris will not be permitted.

#### 1.8 RELOCATIONS

Perform the removal and reinstallation of relocated items as indicated with workmen skilled in the trades involved. Items to be relocated which are damaged by the Contractor shall be repaired or replaced with new undamaged items as approved by the Contracting Officer.

#### 1.9 REQUIRED DATA

The Demolition plan shall include procedures for careful removal and disposition of materials specified to be salvaged, coordination with other work in progress, a disconnection schedule of utility services, a detailed description of methods and equipment to be used for each operation and of the sequence of operations. Provide procedures for safe conduct of the work in accordance with COE EM 385-1-1.

#### 1.10 ENVIRONMENTAL PROTECTION

Comply with the Environmental Protection Agency requirements specified.

#### 1.11 USE OF EXPLOSIVES

Use of explosives will not be permitted.

### PART 2 PRODUCTS

#### 2.1 FILL MATERIAL

Comply with excavating, backfilling, and compacting procedures for soils used as backfill material to fill basements, voids, depressions or excavations resulting from demolition of structures.

### PART 3 EXECUTION

#### 3.1 EXISTING FACILITIES TO BE REMOVED

##### 3.1.1 Structures

a. Remove existing structures indicated to be removed to foundation walls 2 feet below grade. Sidewalks, curbs, gutters and street light bases shall be removed as indicated.

##### 3.1.2 Utilities and Related Equipment

###### 3.1.2.1 General Requirements

Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by the Contracting Officer. Do not interrupt existing utilities serving facilities occupied and used by the Government except when approved in writing and then only after temporary utility services have been approved and provided. Do not begin demolition work until all utility disconnections have been made. Shut off and cap utilities for future use, as indicated.

###### 3.1.2.2 Disconnecting Existing Utilities

Remove existing utilities, as indicated and terminate in a manner conforming to the nationally recognized code covering the specific utility and approved by the Contracting Officer. When utility lines are encountered that are not indicated on the drawings, the Contracting Officer shall be notified prior to further work in that area. Remove meters and related equipment and deliver to a location in accordance with instructions of the Contracting Officer. Contact Canoochee EMC 2 days in advance to have existing electric utilities disconnected.

##### 3.1.3 Chain Link Fencing

Remove chain link fencing, gates and other related salvaged items scheduled for removal and transport to designated areas. Remove gates as whole units. Cut chain link fabric to 50 foot lengths and store in rolls off the ground.

##### 3.1.4 Paving and Slabs

Remove concrete and asphaltic concrete paving and slabs including aggregate base as indicated to a depth of 24 inches below existing adjacent grade. Provide neat sawcuts at limits of pavement removal as indicated.

##### 3.1.5 Patching

Where removals leave holes and damaged surfaces exposed in the finished work, patch and repair these holes and damaged surfaces to match adjacent finished surfaces. Where new work is to be applied to existing surfaces, perform removals and patching in a manner to produce surfaces suitable for receiving new work. Finished surfaces of patched area shall be flush with the adjacent existing surface and shall match the existing adjacent surface as closely as possible as to texture and finish.

### 3.2 DISPOSITION OF MATERIAL

#### 3.2.1 Title to Materials

Except for salvaged items specified in related Sections, and for materials or equipment scheduled for salvage, all materials and equipment removed and not reused or salvaged, shall become the property of the Contractor and shall be removed from Government property. Title to materials resulting from demolition, and materials and equipment to be removed, is vested in the Contractor upon approval by the Contracting Officer of the Contractor's demolition and removal procedures, and authorization by the Contracting Officer to begin demolition. The Government will not be responsible for the condition or loss of, or damage to, such property after contract award.

Materials and equipment shall not be viewed by prospective purchasers or sold on the site.

### 3.3 DISPOSAL OF REMOVED MATERIALS

#### 3.3.1 Sub Title

Dispose of debris, rubbish, scrap, and other nonsalvageable materials resulting from removal operations with all applicable federal, state and local regulations as contractually specified. Removed materials shall not be stored on the project site.

#### 3.3.2 Burning on Government Property

Burning of materials removed from demolished structures will not be permitted on Government property.

#### 3.3.3 Removal from Government Property

Transport waste materials removed from demolished structures, except waste soil, from Government property for legal disposal. Dispose of waste soil as directed.

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SECTION 02231

CLEARING AND GRUBBING

09/03

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## SECTION 02231

CLEARING AND GRUBBING  
09/03

## PART 1 GENERAL

## 1.1 DELIVERY, STORAGE, AND HANDLING

Deliver materials to, store at the site, and handle in a manner which will maintain the materials in their original manufactured or fabricated condition until ready for use.

## PART 2 PRODUCTS

## 2.1 TREE WOUND PAINT

Bituminous based paint of standard manufacture specially formulated for tree wounds.

## PART 3 EXECUTION

## 3.1 PROTECTION

## 3.1.1 Roads and Walks

Keep roads and walks free of dirt and debris at all times.

## 3.1.2 Trees, Shrubs, and Existing Facilities

Trees and vegetation to be left standing shall be protected from damage incident to clearing, grubbing, and construction operations by the erection of barriers or by such other means as the circumstances require.

## 3.1.3 Utility Lines

Protect existing utility lines that are indicated to remain from damage. Notify the Contracting Officer immediately of damage to or an encounter with an unknown existing utility line. The Contractor shall be responsible for the repairs of damage to existing utility lines that are indicated or made known to the Contractor prior to start of clearing and grubbing operations. When utility lines which are to be removed are encountered within the area of operations, the Contractor shall notify the Contracting Officer in ample time to minimize interruption of the service.

## 3.2 CLEARING

Clearing shall consist of the felling, trimming, and cutting of trees into sections and the satisfactory disposal of the trees and other vegetation designated for removal, including downed timber, snags, brush, and rubbish occurring within the areas to be cleared. Clearing shall also include the removal and disposal of structures that obstruct, encroach upon, or otherwise obstruct the work. Trees, stumps, roots, brush, and other vegetation in areas to be cleared shall be cut off flush with or below the original ground surface, except such trees and vegetation as may be indicated or directed to be left standing. Trees designated to be left



standing within the cleared areas shall be trimmed of dead branches 1-1/2 inches or more in diameter and shall be trimmed of all branches the heights indicated or directed. Limbs and branches to be trimmed shall be neatly cut close to the bole of the tree or main branches. Cuts more than 1-1/2 inches in diameter shall be painted with an approved tree-wound paint.

### 3.3 TREE REMOVAL

Where indicated or directed, trees and stumps that are designated as trees shall be removed from areas outside those areas designated for clearing and grubbing. This work shall include the felling of such trees and the removal of their stumps and roots as specified in paragraph GRUBBING. Trees shall be disposed of as specified in paragraph DISPOSAL OF MATERIALS.

### 3.4 PRUNING

Prune trees designated to be left standing within the cleared areas of dead branches 1 1/2 inches or more in diameter; and trim branches to heights and in a manner as indicated. Neatly cut limbs and branches to be trimmed close to the bole of the tree or main branches. Paint cuts more than 1 1/4 inches in diameter with an approved tree wound paint.

### 3.5 GRUBBING

Grubbing shall consist of the removal and disposal of stumps, roots larger than 3 inches in diameter, and matted roots from the designated grubbing areas. Material to be grubbed, together with logs and other organic or metallic debris not suitable for foundation purposes, shall be removed to a depth of not less than 18 inches below the original surface level of the ground in areas indicated to be grubbed and in areas indicated as construction areas under this contract, such as areas for buildings, and areas to be paved. Depressions made by grubbing shall be filled with suitable material and compacted to make the surface conform with the original adjacent surface of the ground.

### 3.6 DISPOSAL OF MATERIALS

#### 3.6.1 Saleable Timber

The Government shall, by separate contract, harvest all saleable timber from the project site. All remaining timber, limbs, tops, stumps, and debris shall be cleared and disposed of by the Contractor as specified.

#### 3.6.2 Nonsaleable Materials

Logs, stumps, roots, brush, rotten wood, and other refuse from the clearing and grubbing operations, except for salable timber, shall be disposed of outside the limits of Government-controlled land at the Contractor's responsibility, except when otherwise directed in writing. Such directive will state the conditions covering the disposal of such products and will also state the areas in which they may be placed.

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**08/03**

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## SECTION 02300S

## EARTHWORK

**08/03**

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

## ASTM INTERNATIONAL (ASTM)

|             |   |
|-------------|---|
| ASTM C 136  | (2001) Sieve Analysis of Fine and Coarse Aggregates   |
| ASTM D 1140 | (2000) Amount of Material in Soils Finer than the No. 200 (75-micrometer) Sieve                                       |
| ASTM D 2216 | (2000) Density and Unit Weight of Soil in Place by Nuclear Method   |
| ASTM D 1556 | (2000) Density and Unit Weight of Soil in Place by the Sand-Cone Method   |
| ASTM D 1557 | (2002) Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/cu. ft. (2,700 kN-m/cu.m.)) |
| ASTM D 2487 | (2000) Soils for Engineering Purposes (Unified Soil Classification System)  |
| ASTM D 422  | (1963; R 2002) Particle-Size Analysis of Soils  |
| ASTM D 4318 | (2000) Liquid Limit, Plastic Limit, and Plasticity Index of Soils   |

## U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

|                  |   |
|------------------|---|
| EPA 530/F-93/004 | (1993; Rev O; Updates I, II, IIA, IIB, and III) Test Methods for Evaluating Solid Waste (Vol IA, IB, IC, and II) (SW-846) |
| EPA 600/4-79/020 | (1983) Methods for Chemical Analysis of Water and Wastes  |

## 1.2 DEFINITIONS

### 1.2.1 Satisfactory Materials

#### 1.2.1.1 Earthwork, Roadwork, and Utilities Systems (except beneath buildings)

Satisfactory materials shall comprise any materials classified by ASTM D 2487 as GW, GP, GM, GP-GM, GW-GM, GC, GP-GC, GM-GC, SW, SP, SM, SW-SM, SC, SW-SC, SP-SM or SP-SC. Satisfactory materials for grading shall be free from roots and other organic matter, trash, debris, frozen material, and stones larger than 3 inches in any dimension.

#### 1.2.1.2 Beneath Buildings

- a. Natural Insitu Soil: Satisfactory materials for natural insitu soil supporting building foundations and/or slabs shall be limited to materials classified in ASTM D 2487 as GW, GP, GM, GP-GM, GW-GM, GC, GP-GC, GM-GC, SW, SP, SM, SW-SM, SC, SW-SC, SP-SM or SP-SC and shall be free of trash, debris, roots or other organic matter, frozen material, and stones larger than 2 inches in any dimension.
- b. Foundation Fill or Backfill: Satisfactory materials for fill or backfill supporting building foundations and/or slabs shall be limited to materials classified in ASTM D 2487 as GW, GP, GM, GP-GM, GW-GM, GC, GP-GC, GM-GC, SW, SP, SM, SW-SM, SC, SW-SC, SP-SM or SP-SC, and shall be free of trash, debris, roots or other organic matter, frozen material, and stones larger than 2 inches in any dimension.

### 1.2.2 Unsatisfactory Materials

#### 1.2.2.1 Earthwork, Roadwork, and Utilities Systems (except beneath buildings)

Materials which do not comply with the requirements for satisfactory materials are unsatisfactory. Unsatisfactory materials also include man-made fills; trash; refuse; backfills from previous construction; demolition debris; and material classified as satisfactory which contains root and other organic matter or frozen material. The Contracting Officer shall be notified of any contaminated materials. All suspected unexploded ordinance must be immediately reported to range safety Roy Griggs at (912) 767-7568.

#### 1.2.2.2 Beneath Buildings

- a. Natural Insitu Soil: Unsatisfactory materials for fill or backfill supporting building foundations and/or slabs shall be materials classified in ASTM D 2487 as CL, ML, Pt, OH, and OL and any other materials not defined as satisfactory. The Contracting Officer shall be notified of any contaminated materials.
- b. Foundation Fill or Backfill: Unsatisfactory materials for fill or backfill supporting building foundations and/or slabs shall be materials classified in ASTM D 2487 as CL, ML, Pt, OH, OL, CH, and MH.
- c. Wet of Soft Materials: Materials determined by the Contracting

Officer as too wet or too soft to provide a stable subgrade, foundation, or fill will be classified as unsatisfactory regardless of classification. However, if such materials do meet the appropriate ASTM D 2487 classification, the Contractor shall at no additional cost to the Government, recondition the materials if so directed by the Contracting Officer.

#### 1.2.3 Cohesionless and Cohesive Materials

Cohesionless materials include materials classified in ASTM D 2487 as GW, GP, SW, and SP. Cohesive materials include materials classified as GC, SC, ML, CL, MH, CH, GP-GC, GM-GC, SW-SC, SP-SC, and CL-ML and the organic materials Pt, OL, and OH. Materials classified as GM, GP-GM, GW-GM, SW-SM, SP-SM, and SM will be identified as cohesionless only when the fines are nonplastic (plasticity index of zero); otherwise they will be considered cohesive. Testing required for classifying materials shall be in accordance with ASTM D 4318, ASTM C 136, ASTM D 422, and ASTM D 1140.

#### 1.2.4 Degree of Compaction

Degree of compaction is expressed as a percentage of the maximum density obtained by the test procedure presented in ASTM D 1557 abbreviated as a percent of laboratory maximum density.

#### 1.2.5 Unstable Material

Unstable material shall consist of materials too wet to properly support the utility pipe, conduit, or appurtenant structure.

#### 1.2.6 Select Granular Material

Select granular material shall consist of well-graded sand, gravel, crushed gravel, or crushed stone composed of hard, tough, and durable particles, and shall contain not more than 10 percent by weight of material passing a No. 200 mesh sieve and no less than 95 percent by weight passing the 3 inches sieve. The maximum allowable aggregate size shall be 1.6 inches, or the maximum size recommended by the pipe manufacturer, whichever is smaller.

#### 1.2.7 Initial Backfill Material

Initial backfill shall consist of select granular material or satisfactory materials free from rocks 2 inches or larger in any dimension or free from rocks of such size as recommended by the pipe manufacturer, whichever is smaller. When the pipe is coated or wrapped for corrosion protection, the initial backfill material shall be free of stones larger than 1 inch in any dimension or as recommended by the pipe manufacturer, whichever is smaller.

#### 1.2.8 Maximum Dry Density

The maximum dry density is expressed as the maximum density obtained when the soil is compacted in accordance with ASTM D 1557, abbreviated as laboratory maximum dry density.

#### 1.2.9 Optimum Moisture Content

The optimum moisture content is the moisture content corresponding to the maximum dry density obtained by the test procedure presented in ASTM D 1557.

### 1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

#### 1.3.1 General Earthwork and Roadwork

##### SD-06 Test Reports

###### Testing

Within 24 hours of conclusion of physical tests, three copies of test results.

##### SD-07 Certificates

###### Testing; G, RE

Qualifications of the commercial testing laboratory.

#### 1.3.2 Earthwork Beneath Buildings

##### SD-06 Test Reports

###### Field Density Tests

###### Testing of Fill and Backfill Materials

Copies of all laboratory and field test reports within 24 hours of the completion of the test. Each report shall be properly identified. Test methods used and compliance with specified test standards shall be described. Summary sheets specified herein shall be submitted as indicated.

### 1.4 CLASSIFICATION OF EXCAVATION

No consideration will be given to the nature of the materials, and all excavation will be designated as unclassified excavation.

#### 1.4.1 Blasting

Blasting will not be permitted.

### 1.5 CRITERIA FOR BIDDING

Base bids on the following criteria:

- a. Surface elevations are as indicated.
- b. Pipes or other artificial obstructions, except those indicated, will not be encountered.

## PART 2 PRODUCTS

### 2.1 REQUIREMENTS FOR OFFSITE SOILS

All soils, other than Government furnished borrow, brought in for use as backfill shall be tested for TPH, BTEX and full TCLP including

ignitability, corrosivity and reactivity. Backfill shall contain less than 100 parts per million (ppm) of total petroleum hydrocarbons (TPH) and less than 10 ppm of the sum of Benzene, Toluene, Ethyl Benzene, and Xylene (BTEX) and shall not fail the TCPL test. TPH concentrations shall be determined by using EPA 600/4-79/020 Method 418.1. BTEX concentrations shall be determined by using EPA 530/F-93/004 Method 5030/8020. TCLP shall be performed in accordance with EPA 530/F-93/004 Method 1311. Provide Borrow Site Testing for TPH, BTEX and TCLP from a composite sample of material from the borrow site, with at least one test from each borrow site. Material shall not be brought on site until tests have been approved by the Contracting Officer.

## PART 3 EXECUTION

### 3.1 GENERAL EXCAVATION

The Contractor shall perform excavation of every type of material encountered within the limits of the project to the lines, grades, and elevations indicated and as specified. Grading shall be in conformity with the typical sections shown and the tolerances specified in paragraph FINISHING. Satisfactory excavated materials shall be transported to and placed in fill or embankment within the limits of the work. Unsatisfactory materials encountered within the limits of the work shall be excavated below grade and replaced with satisfactory materials as directed. Such excavated material and the satisfactory material ordered as replacement shall be included in excavation. Surplus satisfactory excavated material not required for fill or embankment shall be disposed of in areas approved for surplus material storage or designated waste areas. Unsatisfactory excavated material shall be disposed of in designated waste or spoil areas.

During construction, excavation and fill shall be performed in a manner and sequence that will provide proper drainage at all times. Material required for fill or embankment in excess of that produced by excavation within the grading limits shall be excavated from the borrow areas indicated or, if no borrow areas are indicated, from other approved areas selected by the Contractor as specified.

#### 3.1.1 Ditches

Excavation of ditches shall be accomplished by cutting accurately to the cross sections, grades, and elevations shown. Ditches shall not be excavated below grades shown. Excessive open ditch excavation shall be backfilled with satisfactory, thoroughly compacted, material to grades shown. Material excavated shall be disposed of as shown or as directed, except that in no case shall material be deposited less than 3 feet from the edge of a ditch. The Contractor shall maintain excavations free from detrimental quantities of leaves, brush, sticks, trash, and other debris until final acceptance of the work.

#### 3.1.2 Drainage Structures

Excavations shall be made to the lines, grades, and elevations shown, or as directed. Trenches and foundation pits shall be of sufficient size to permit the placement and removal of forms for the full length and width of structure footings and foundations as shown. Rock or other hard foundation material shall be cleaned of loose debris and cut to a firm, level, stepped, or serrated surface. Loose disintegrated rock and thin strata shall be removed. When concrete or masonry is to be placed in an excavated area, the bottom of the excavation shall not be disturbed. Excavation to the final grade level shall not be made until just before the concrete or



masonry is to be placed.

### 3.1.3 Drainage

Provide for the collection and disposal of surface and subsurface water encountered during construction. Completely drain construction site during periods of construction to keep soil materials sufficiently dry. The Contractor shall establish/construct storm drainage features (ponds/basins) at the earliest stages of site development, and throughout construction grade the construction area to provide positive surface water runoff away from the construction activity and/or provide temporary ditches, swales, and other drainage features and equipment as required to maintain dry soils. When unsuitable working platforms for equipment operation and unsuitable soil support for subsequent construction features develop, remove unsuitable material and provide new soil material as specified herein. It is the responsibility of the Contractor to assess the soil and ground water conditions presented by the plans and specifications and to employ necessary measures to permit construction to proceed.

### 3.1.4 Dewatering

Groundwater flowing toward or into excavations shall be controlled to prevent sloughing of excavation slopes and walls, boils, uplift and heave in the excavation and to eliminate interference with orderly progress of construction. French drains, sumps, ditches or trenches will not be permitted within 3 feet of the foundation of any structure, except with specific written approval, and after specific contractual provisions for restoration of the foundation area have been made. Control measures shall be taken by the time the excavation reaches the water level in order to maintain the integrity of the in situ material. While the excavation is open, the water level shall be maintained continuously, at least 2 feet below the working level. The Contractor shall provide drainage and dewatering as required to ensure that all footing excavations are accomplished with the subgrade soils remaining dry and firm until after the footings are placed and backfilled. Operate dewatering system continuously until construction work below existing water levels is complete.

### 3.1.5 Trench Excavation Requirements

The trench shall be excavated as recommended by the manufacturer of the pipe to be installed. Trench walls below the top of the pipe shall be sloped, or made vertical, and of such width as recommended in the manufacturer's installation manual. Where no manufacturer's installation manual is available, trench walls shall be made vertical, except that trench construction shall be in accordance with OSHA. Trench walls more than 3 feet deep shall be cut back, excavated to at least the angle of repose of the soil. Special attention shall be given to slopes which may be adversely affected by weather or moisture content. The trench width below the top of pipe shall not exceed 24 inches plus pipe outside diameter (O.D.) for pipes of less than 24 inches inside diameter and shall not exceed 36 inches plus pipe outside diameter for sizes larger than 24 inches inside diameter. Where recommended trench widths are exceeded, redesign, stronger pipe, or special installation procedures shall be utilized by the Contractor. The cost of redesign, stronger pipe, or special installation procedures shall be borne by the Contractor without any additional cost to the Government.

#### 3.1.5.1 Bottom Preparation

The bottoms of trenches shall be accurately graded to provide uniform bearing and support for the bottom quadrant of each section of the pipe. Bell holes shall be excavated to the necessary size at each joint or coupling to eliminate point bearing. Stones of 2 inches or greater in any dimension, or as recommended by the pipe manufacturer, whichever is smaller, shall be removed to avoid point bearing.

#### 3.1.5.2 Removal of Unstable Material

Where unstable material is encountered in the bottom of the trench, such material shall be removed to the depth directed and replaced to the proper grade with select granular material as provided in paragraph BACKFILLING AND COMPACTION. When removal of unstable material is required due to the Contractor's fault or neglect in performing the work, the resulting material shall be excavated and replaced by the Contractor without additional cost to the Government.

#### 3.1.5.3 Excavation for Appurtenances

Excavation for manholes, catch-basins, inlets, or similar structures shall be sufficient to leave at least 12 inches clear between the outer structure surfaces and the face of the excavation or support members and of sufficient size to permit the placement and removal of forms for the full length and width of structure footings and foundations as shown. Removal of unstable material shall be as specified above. When concrete or masonry is to be placed in an excavated area, special care shall be taken not to disturb the bottom of the excavation. Excavation to the final grade level shall not be made until just before the concrete or masonry is to be placed.

#### 3.1.6 Underground Utilities

Movement of construction machinery and equipment over pipes and utilities during construction shall be at the Contractor's risk. Excavation made with power-driven equipment is not permitted within 2 feet of known Government-owned utility or subsurface construction. For work immediately adjacent to or for excavations exposing a utility or other buried obstruction, excavate by hand. Start hand excavation on each side of the indicated obstruction and continue until the obstruction is uncovered or until clearance for the new grade is assured. Support uncovered lines or other existing work affected by the contract excavation until approval for backfill is granted by the Contracting Officer. Report damage to utility lines or subsurface construction immediately to the Contracting Officer.

#### 3.1.7 Structural Excavation

Excavation shall conform to the dimensions and elevations indicated for each building, structure, and footing except as specified, and shall include trenching for utility and foundation drainage systems to a point 5 feet beyond the building line of each building and structure, excavation for outside grease interceptors and all work incidental thereof. Excavation shall extend a sufficient distance from walls and footings to allow for placing and removal of forms. Excavations below indicated depths will not be permitted except to remove unsatisfactory material. Unsatisfactory material encountered below the grades shown shall be removed as directed and replaced with satisfactory material. Satisfactory material removed below the depths indicated, without specific direction of the Contracting Officer, shall be replaced, at no additional cost to the

Government, with satisfactory materials to the indicated excavation grade. Satisfactory material shall be placed and compacted as specified in paragraph FILLING AND BACKFILLING. Determination of elevations and measurements of approved overdepth excavation of unsatisfactory material below grades indicated shall be done under the direction of the Contracting Officer.

### 3.2 SELECTION OF BORROW MATERIAL

Borrow material shall be selected to meet the requirements and conditions of the particular fill or embankment for which it is to be used. Borrow material shall be obtained from the borrow areas designated by the Government or from approved private sources, selected by the Contractor. Unless otherwise provided in the contract, the Contractor shall obtain from the owners the right to procure material, pay royalties and other charges involved, and bear the expense of developing the sources, including rights-of-way for hauling. Borrow material from approved sources on Government-controlled land may be obtained without payment of royalties. Unless specifically provided, no borrow shall be obtained within the limits of the project site without prior written approval. Necessary clearing, grubbing, and satisfactory drainage of borrow pits and the disposal of debris thereon shall be considered related operations to the borrow excavation.

### 3.3 OPENING AND DRAINAGE OF EXCAVATION AND BORROW PITS

Except as otherwise permitted, borrow pits and other excavation areas shall be excavated providing adequate drainage. Overburden and other spoil material shall be transported to designated spoil areas or otherwise disposed of as directed. Borrow pits shall be neatly trimmed and drained after the excavation is completed. The Contractor shall ensure that excavation of any area, operation of borrow pits, or dumping of spoil material results in minimum detrimental effects on natural environmental conditions.

### 3.4 FINAL GRADE OF SURFACES TO SUPPORT CONCRETE

Excavation to final grade shall not be made until just before subgrade materials, or concrete is to be placed. All surfaces shall be protected from erosion resulting from ponding or flow of water.

### 3.5 GROUND SURFACE PREPARATION

#### 3.5.1 General Requirements

Ground surface on which fill is to be placed shall be stripped of live, dead, or decayed vegetation, rubbish, debris, and other unsatisfactory material; plowed, disked, or otherwise broken up to a depth of 12 inches; pulverized; moistened or aerated as necessary to plus or minus 2.5 percent of optimum moisture; thoroughly mixed; and compacted to at least 95 percent laboratory maximum density. Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, vibratory compactors, or other approved equipment. The prepared ground surface shall be scarified and moistened or aerated as required just prior to placement of embankment materials to assure adequate bond between embankment material and the prepared ground surface.

### 3.5.1.1 Subgrade Preparation for Building Sites

Unsatisfactory material in surfaces to receive fill or in excavated areas shall be removed and replaced with satisfactory materials as directed by the Contracting Officer. The surface shall be scarified to a depth of 12 inches before the fill is started. Sloped surfaces steeper than 1 vertical to 4 horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When subgrades are less than the specified density, the ground surface shall be broken up to a minimum depth of 12 inches, pulverized, and compacted to the specified density. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches and compacted as specified for the adjacent fill. Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, or other approved equipment well suited to the soil being compacted. Material shall be moistened or aerated as necessary to plus or minus 2.5 percent of optimum moisture. Minimum subgrade density shall be as specified in paragraph FILLING AND BACKFILLING.

### 3.5.2 Frozen Material

Material shall not be placed on surfaces that are muddy, frozen, or contain frost. Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, or other approved equipment well suited to the soil being compacted. Material shall be moistened or aerated as necessary to plus or minus 2.5 percent of optimum moisture. This prohibition encompasses all foundation types, including the natural ground, all prepared subgrades (whether in an excavation or on an embankment) and all layers of previously placed and compacted earth fill which become the foundations for successive layers of earth fill. All material that freezes or has been subjected to freeze-thaw action during the construction work, or during periods of temporary shutdowns, such as, but not limited to, nights, holidays, weekends, winter shutdowns, or earthwork operations, shall be removed to a depth that is acceptable to the Contracting Officer and replaced with new material. Alternatively, the material shall be thawed, dried, reworked, and recompact to the specified criteria before additional material is placed. The Contracting Officer will determine when placement of fill shall cease due to cold weather. The Contracting Officer may elect to use average daily air temperatures, and/or physical observation of the soils for his determination. Fill material shall not contain frozen clumps of soil, snow, or ice. Minimum subgrade density shall be as specified in paragraph TESTING.

### 3.6 UTILIZATION OF EXCAVATED MATERIALS

Unsatisfactory materials removed from excavations shall be disposed of in designated waste disposal or spoil areas. Satisfactory material removed from excavations shall be used, insofar as practicable, in the construction of fills, embankments, subgrades, shoulders, bedding (as backfill), and for similar purposes. No satisfactory excavated material shall be wasted without specific written authorization. Satisfactory material authorized to be wasted shall be disposed of in designated areas approved for surplus material storage or designated waste areas as directed. No excavated material shall be disposed of to obstruct the flow of any stream, endanger a partly finished structure, impair the efficiency or appearance of any structure, or be detrimental to the completed work in any way.

### 3.7 MOISTURE CONTENT

Satisfactory materials in each layer of fill shall contain the amount of moisture within the limits specified below. Materials that are not within the specified limits after compaction shall be reworked regardless of density. The moisture content after compaction shall be as uniform as practicable throughout any one layer and shall be within the limits of 2.5 percentage points above optimum moisture content and 2.5 percentage points below optimum moisture content. Materials which are too wet shall be disked, harrowed, plowed, bladed, or otherwise manipulated to reduce the moisture content to within the specified limits. Materials which are too dry shall be broken up, sprinkled, and thoroughly mixed to bring the moisture content uniformly up to within specified limits of moisture content specified above, the Contractor shall either adjust the moisture content to bring it within the specified limits or remove it from the fill.

### 3.8 GENERAL EARTHWORK

#### 3.8.1 Earth Embankments

Earth embankments shall be constructed from satisfactory materials free of organic or frozen material and rocks with any dimension greater than 3 inches. The material shall be placed in successive horizontal layers of loose material not more than 8 inches in depth. Each layer shall be spread uniformly on a soil surface that has been moistened or aerated as necessary, and scarified or otherwise broken up so that the fill will bond with the surface on which it is placed. After spreading, each layer shall be plowed, disked, or otherwise broken up; moistened or aerated as necessary; thoroughly mixed; and compacted to at least 95 percent laboratory maximum density. Compaction requirements for the upper portion of earth embankments forming subgrade for pavements shall be identical with those requirements specified in paragraph SUBGRADE PREPARATION. Compaction shall be accomplished by sheepfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, vibratory compactors, or other approved equipment.

#### 3.8.2 Subgrade Preparation

##### 3.8.2.1 Proof Rolling

Proof rolling shall be done on an exposed subgrade free of surface water (wet conditions resulting from rainfall) which would promote degradation of an otherwise acceptable subgrade. After stripping, proof roll the existing subgrade with six passes of a dump truck loaded with 6 cubic yards of soil. Operate the truck in a systematic manner to ensure the number of passes over all areas, and at speeds between 2 1/2 to 3 1/2 mph. When proof rolling, one-half of the passes made with the roller shall be in a direction perpendicular to the other passes. Notify the Contracting Officer a minimum of 3 days prior to proof rolling. Proof rolling shall be performed in the presence of the Contracting Officer. Rutting or pumping of material shall be undercut as directed by the Contracting Officer to a depth of 24 inches and replaced with fill and backfill material. Bids shall be based on replacing approximately 400 square yards, with an average depth of 24 inches at various locations.

##### 3.8.2.2 Construction

Subgrade shall be shaped to line, grade, and cross section, and compacted as specified. This operation shall include plowing, disking, and any moistening or aerating required to obtain specified compaction. Materials

shall be moistened or aerated as necessary to plus or minus 2.5 percent of optimum moisture. Soft or otherwise unsatisfactory material shall be removed and replaced with satisfactory excavated material or other approved material as directed. Low areas resulting from removal of unsatisfactory material shall be brought up to required grade with satisfactory materials, and the entire subgrade shall be shaped to line, grade, and cross section and compacted as specified. When the subgrade is in cut, the top 12 inches of subgrade shall be scarified, windrowed, moistened or aerated as necessary to plus or minus 2.5 percent of optimum moisture, thoroughly blended, reshaped, and compacted. The elevation of the finish subgrade shall not vary more than 0.05 foot from the established grade and cross section.

#### 3.8.2.3 Compaction

Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, vibratory compactors, or other approved equipment.

### 3.9 FILLING AND BACKFILLING FOR BUILDINGS

#### 3.9.1 General

Filling and backfilling shall not begin until construction below finish grade has been approved, underground utilities systems have been inspected, tested and approved, forms removed and the excavation cleaned of trash and debris. Backfill shall not be placed in areas that are wet, muddy, contain organic materials or are otherwise unacceptable to the Contracting Officer.

Satisfactory materials shall be used in bringing fills and backfills to the lines and grades indicated and for replacing unsatisfactory materials. Satisfactory material shall be free from roots and other organic matter, trash, debris, frozen materials, and stones larger than 2 inches in any dimension. Where pipe and/or utility lines are coated or wrapped for protection against corrosion, the backfill material up to an elevation of two feet above sewer lines and one foot above other utility lines shall be free from stones larger than one inch in any dimension.

#### 3.9.2 Placement

Satisfactory materials shall be placed in horizontal layers not exceeding 8 inches in loose thickness, or 4 inches in loose thickness where hand-operated compactors are used. After placing, each layer shall be plowed, disked, or otherwise broken up, moistened or aerated as necessary, thoroughly mixed and compacted as specified. Backfill shall be brought to the indicated finish grade. Heavy equipment for spreading and compacting backfill shall not be operated closer to foundation or retaining walls than a distance equal to the height of backfill above the top of footing; the area remaining shall be compacted in layers not more than 100 mm in loose thickness with power-driven hand tampers suitable for the material being compacted. Backfill shall be placed carefully around pipes or tanks to avoid damage to coatings, wrappings, or tanks. Backfill shall not be placed against foundation walls prior to 7 days after completion of each compaction, each layer shall be thoroughly and uniformly blended throughout its entire thickness by diskings.

#### 3.9.3 Compaction

Compaction shall be accomplished by sheepsfoot roller, pneumatic-tired rollers, smooth-drum vibratory rollers or other approved equipment well

suited to the soil being compacted. Generally, sheepsfoot rollers are best suited for compacting cohesive material while smooth-drum vibratory rollers are best suited for compacting cohesionless materials. In areas inaccessible to heavy equipment, or where in the opinion of the Contracting Officer, use of heavy equipment may cause damage to pipes, conduits, or structures, approved power-driven hand tampers suitable for the material being compacted shall be used. Each layer of fill and backfill shall be compacted to not less than the percentage of maximum density specified below.

|  | Percent Laboratory<br>Maximum Density |
|--|---------------------------------------|
| <hr/>  |                                       |
| Fill, Embankment, and Backfill   |                                       |
| <hr/>  |                                       |
| Under structures, steps,<br>paved areas, and in trenches   | 100                                   |
| Beside structures,<br>footings, and walls  | 100                                   |
| Under sidewalks and grassed<br>areas   | 95                                    |
| Subgrade (Top of Fill, Embankment, and Backfill)   |                                       |
| <hr/>  |                                       |
| Under building slabs, steps, and paved<br>areas, top 12 inches   | 100                                   |
| Under footings, top 12 inches  | 100                                   |
| Under sidewalks and grassed<br>areas, top 6 inches   | 95                                    |
| Subgrade (Undisturbed Native Soil or Cut)  |                                       |
| <hr/>  |                                       |
| Under building slabs, steps, and<br>paved areas, top 12 inches   | 100                                   |
| Under footings, top 12 inches  | 100                                   |
| Under sidewalks and grassed areas,<br>top 12 inches  | 95                                    |
| Approved compacted subgrades that are disturbed by the Contractor's<br>operations or adverse weather shall be scarified and recompact to the<br>required density prior to further construction thereon. Recompaction over<br>underground utilities and heating lines shall be by hand tamping. For<br>compact subgrades and/or any lift of fill or backfill that fails to meet<br>the specified density and/or moisture requirements, the entire subgrade<br>and/or entire lift of fill shall be broken up to a minimum depth of 8 inches,<br>pulverized, the moisture content adjusted as necessary, and recompact to<br>the specified density, even if this action requires the removal and<br>replacement of subsequently placed satisfactory lifts of fill. Tests on<br>recompact areas shall be performed to determine conformance with |                                       |

specification requirements. Lifts of fill placed without being field density tested will not be accepted as satisfactory under any circumstances.

### 3.10 BACKFILLING AND COMPACTION FOR UTILITIES SYSTEMS

Backfill material shall consist of satisfactory material, select granular material, or initial backfill material as required. Backfill shall be placed in layers not exceeding 6 inches loose thickness for compaction by hand operated machine compactors, and 8 inches loose thickness for compaction by hand operated machine compactors, and 8 inches loose thickness for other than hand operated machines, unless otherwise specified. Each layer shall be compacted to at least 95 percent maximum density, unless otherwise specified.

#### 3.10.1 Trench Backfill

Trenches shall be backfilled to the grade shown. The trench shall be backfilled to two feet above the top of pipe prior to performing the required pressure tests. The joints and couplings shall be left uncovered during the pressure test. The trench shall not be backfilled until all specified tests are performed.

##### 3.10.1.1 Replacement of Unstable Material

Unstable material removed from the bottom of the trench or excavation shall be replaced with select granular material placed in layers not exceeding 6 inches loose thickness.

##### 3.10.1.2 Initial Backfill

Initial backfill material shall be placed and compacted with approved tampers to a height of at least one foot above the utility pipe or conduit. The backfill shall be brought up evenly on both sides of the pipe for the full length of the pipe. Care shall be taken to ensure thorough compaction of the fill under the haunches of the pipe.

##### 3.10.1.3 Final Backfill

The remainder of the trench, except for special materials for roadways, railroads and airfields, shall be filled with satisfactory material. Backfill material shall be placed and compacted as follows:

- a. Roadways: Backfill shall be placed up to the required elevation as specified. Water flooding or jetting methods of compaction will not be permitted.
- b. Sidewalks, Turfed or Seeded Areas and Miscellaneous Areas: Backfill shall be deposited in layers of a maximum of one foot loose thickness, and compacted to 95 percent maximum density. Compaction by water flooding or jetting will not be permitted. This requirement shall also apply to all other areas not specifically designated above.

#### 3.10.2 Backfill for Appurtances

After the manhole, catchbasin, inlet, or similar structure has been constructed and the concrete has been allowed to cure for 7 days, backfill shall be placed in such a manner that the structure will not be damaged by the shock of falling earth. The backfill material shall be deposited and



compacted as specified for final backfill, and shall be brought up evenly on all sides of the structure to prevent eccentric loading and excessive stress.

### 3.11 FINISHING

The surface of excavations, embankments, and subgrades shall be finished to a smooth and compact surface in accordance with the lines, grades, and cross sections or elevations shown. The degree of finish for graded areas shall be within 0.1 foot of the grades and elevations indicated except that the degree of finish for subgrades shall be specified in paragraph SUBGRADE PREPARATION. Ditches shall be finished in a manner that will result in effective drainage. The surface of areas to be turfed shall be finished to a smoothness suitable for the application of turfing materials.

#### 3.11.1 Subgrade and Embankment Protection

During construction, embankments and excavations shall be kept shaped and drained. Ditches and drains along subgrade shall be maintained to drain effectively at all times. The finished subgrade shall not be disturbed by traffic or other operation and shall be protected and maintained by the Contractor in a satisfactory condition until ballast, subbase, base, or pavement is placed. The storage or stockpiling of materials on the finished subgrade will not be permitted. No subbase, base course, ballast, or pavement shall be laid until the subgrade has been checked and approved, and in no case shall subbase, base, surfacing, pavement, or ballast be placed on a muddy, spongy, or frozen subgrade.

#### 3.11.2 Grading Around Structures

Areas within 5 feet outside of each building and structure line shall be constructed true-to-grade, shaped to drain, and shall be maintained free of trash and debris until final inspection has been completed and the work has been accepted.

### 3.12 TESTING

Testing shall be the responsibility of the Contractor and shall be performed at no additional cost to the Government. Tests shall be performed by an approved commercial testing laboratory. Field in-place density shall be determined in accordance with ASTM D 1556 and ASTM D 2937.

When test results indicate that compaction is not as specified, the material shall be removed, replaced and recompacted to meet specification requirements. Tests on recompacted areas shall be performed to determine conformance with specification requirements. Inspections and test results shall be certified by a registered professional civil engineer. These certifications shall state that the tests and observations were performed by or under the direct supervision of the engineer and that the results are representative of the materials or conditions being certified by the tests.

The following number of tests, if performed at the appropriate time, will be the minimum acceptable for each type operation.

#### 3.12.1 Fill and Backfill Material Gradation, Classification, and Moisture Content

One test per 500 cubic yards stockpiled or in-place source material. Gradation of fill and backfill material shall be determined in accordance with ASTM D 422 and ASTM D 1140. Liquid limit and plasticity index shall be determined in accordance with ASTM D 4318. Classification of soils

shall be in accordance with ASTM D 2487. Moisture content shall be determined in accordance with ASTM D 2216.

### 3.12.2 Compaction Tests

Compaction tests shall be performed by the test procedure presented in ASTM D 1557. Adequate testing shall be conducted to establish at least five points with at least one point falling within plus or minus 1.5 percentage points of the plotted optimum moisture content.

### 3.12.3 Tests Required on Material Prior to Placement

#### 3.12.3.1 General

All material from required excavations and borrow shall be tested prior to incorporation into the permanent work. The tests shall be performed on samples representative of the various materials to be utilized. Samples shall be carefully selected to represent the full range of materials to be used as fill and/or backfill. The following minimum number of tests shall be performed on the materials prior to the placement of the materials in the work. Additional tests of these types shall be performed when materials of different classification or compaction characteristics are encountered to determine the properties of the materials. The Contracting Officer reserves the right to direct additional testing as required.

#### 3.12.3.2 Classification Tests

Classification tests shall be performed to determine the acceptability of materials in accordance with paragraph MATERIALS. Such tests on materials proposed for use as fill and/or backfill shall be performed prior to their use. Sufficient classification tests shall be performed to define the full range of all materials proposed for use. A minimum of two classification tests shall be performed on each material classified as satisfactory for use. The Contracting Officer may at any time require additional classification tests to confirm material acceptability.

#### 3.12.3.3 Compaction Tests

Compaction tests shall be performed prior to commencement of construction in order to determine the moisture-density relationships of all satisfactory materials proposed for use as fill and/or backfill. For each compaction test performed, an associated or companion classification test and moisture content test shall be performed. Compaction tests shall be performed in sufficient number to establish the full range of maximum dry density and optimum water content. A minimum of 8 compaction tests shall be performed on materials classified as satisfactory for use. Samples for these tests shall not be obtained from the same locations. The Contracting Officer reserves the right to direct where samples for additional compaction tests are obtained. In the event that the compaction characteristics of materials having the same classification vary appreciably, additional compaction tests shall be performed.

#### 3.12.3.4 Moisture Content Tests

Moisture content tests shall be performed on all materials proposed for use as fill and/or backfill to determine their suitability for use in accordance with paragraph Moisture Content. Moisture content tests shall be performed in sufficient number to determine the full range of moisture content. Moisture content test shall be performed for each compaction test and as required to determine acceptability of material prior to placement.

Not less than two moisture content tests shall be performed on each material classified as satisfactory for use.

#### 3.12.4 Tests Required During Placement

##### 3.12.4.1 In-Place Density Tests for General Earthwork

a. One test per 9,000 square feet, or fraction thereof, of each lift of fill or backfill areas compacted by other than hand-operated machines.

b. One test per 250 square feet, or fraction thereof, of each lift of fill or backfill areas compacted by hand-operated machines.

c. One test per 500 linear feet, or fraction thereof, of each lift of embankment or backfill for roads.

d. One test per 7500 square feet, or fraction thereof, of subgrade in native soil or cut in all areas, excluding roads.

e. One test per 250 linear feet, or fraction thereof, of subgrade in embankment or backfill, and in native soil or cut in roads.

##### 3.12.4.2 In-Place Tests for Buildings

Acceptance of the compacted materials shall be determined by the results of field in-place density tests. Density tests in randomly selected locations shall be performed in the material and at the minimum frequency specified below:

| Material<br>Type                 | Location<br>of Material   | Minimum Test<br>Frequency  |
|----------------------------------|---|--|
| Fill, embankment<br>and backfill | Beneath structures, to the<br>5 foot building line  | One test per lift<br>per each<br>increment or<br>fraction of 4000<br>square feet   |
| Fill and backfill                | Areas beside structures,<br>footings, walls, and areas<br>enclosed by grade beams<br>that are compacted by<br>hand operated compaction<br>equipment | One test per foot<br>of depth per<br>each increment or<br>fraction of 200<br>square feet,<br>or for each 50<br>linear feet of<br>long narrow (less<br>than 3 feet<br>wide) |
| Subgrade                         | Under building slabs on<br>grade and paved areas  | One test per<br>each increment or<br>fraction of 2500<br>square feet   |

|          |                |  |
|----------|----------------|--|
| Subgrade | Under footings | One test per<br>every fifth<br>column footing<br>and for each<br>increment or<br>fraction of 75<br>linear feet of<br>wall footings |
|----------|----------------|--|

#### 3.12.4.3 In-Place Density Tests for Utility Systems

Tests shall be performed in sufficient numbers to ensure that the specified density is being obtained. A minimum of one field density test per lift of backfill for every 200 linear feet, or fraction thereof, of installation shall be performed.

#### 3.12.4.4 Moisture Content

In the stockpile(s), excavation, or borrow areas, a minimum of two tests, each with a one-point or two-point compaction test, shall be performed per day per type of material or source of material being placed during stable weather conditions. During unstable weather, tests shall be made as dictated by the local conditions to ensure the moisture content of the placed materials is within the specified limits.

#### 3.12.4.5 Optimum Moisture and Laboratory Maximum Density

One representative test shall be performed per 500 cubic yards of fill, embankment, and backfill, or when any change in material occurs which may affect the optimum moisture content of laboratory maximum density.

#### 3.12.4.6 Time and Location of Tests

The Government reserves the right to specify the location of any test. Whenever there is doubt as to the adequacy of the testing or validity of results, the Contracting Officer may direct that additional tests be performed, at no additional cost to the Government. The field density tests shall be performed at times and locations which will assure the specified compaction is being obtained throughout each lift for all materials placed. Additional field density tests shall be performed in areas where the Contracting Officer determines there is reason to doubt the adequacy of the natural subgrade.

#### 3.12.5 Compaction Control

For fine grained (clayey and silty) soils and for sands with appreciable fines such that normal shaped compaction curves are obtained, results of all compaction tests shall be plotted on a common plot as a family of curves. For each field density test performed, a one-point compaction test, with additional points as needed, shall be performed on the same material on which the field density test was conducted. The one-point compaction test shall be performed on the dry side of the optimum moisture content. For comparison of field density data to the proper laboratory compaction test results, the procedures for the one-point and/or two-point compaction control methods as described in paragraph Compaction Procedure, shall be used.

3.13 DISPOSITION OF SURPLUS MATERIAL

Surplus material or other soil material not required or suitable for filling or backfilling, and brush, refuse, stumps, roots, and timber shall be removed from Government property as directed by the Contracting Officer.

3.14 PROTECTION

Settlement or washing that occurs in graded or backfilled areas prior to acceptance of the work, shall be repaired and grades reestablished to the required elevations and slopes.

-- End of Section --

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## SECTION 02360

SOIL TREATMENT FOR SUBTERRANEAN TERMITE CONTROL  
09/04

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

7 USC Section 136

Federal Insecticide, Fungicide, and  
Rodenticide Act

## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

## SD-03 Product Data

Termiticide Application Plan; G; G, RO

Termiticide application plan with proposed sequence of treatment work with dates and times. The termiticide trade name, EPA registration number, chemical composition, formulation, concentration of original and diluted material, application rate of active ingredients, method of application, area/volume treated, amount applied; and the name and state license number of the state certified applicator shall be included.

## Termiticides

Manufacturer's label and Material Safety Data Sheet (MSDS) for termiticides proposed for use.

## Foundation Exterior

Written verification that other site work will not disturb the treatment.

## Utilities and Vents

Written verification that utilities and vents have been located.

## Crawl and Plenum Air Spaces

Written verification that crawl spaces and plenum air spaces have been located.



#### Verification of Measurement

Written verification that the volume of termiticide used meets the application rate.

#### Application Equipment

A listing of equipment to be used.

#### Warranty

Copy of Contractor's warranty.

### SD-04 Samples

#### Termiticides

Submit on request samples of the pesticides used in this work or the Contracting Officer may draw, at any time and without prior notice, from stocks at the job site. Should analysis, performed by the Government, indicate such samples to contain less than the amount of active ingredient specified on the label, work performed with such products shall be repeated, with pesticides conforming to this specification, at no additional cost to the Government.

### SD-06 Test Reports

#### Equipment Calibration and Tank Measurement

Certification of calibration tests conducted on the equipment used in the termiticide application.

#### Soil Moisture

Soil moisture test result.

#### Quality Assurance

Pest Management Report and copies of daily records signed by an officer of the Contractor.

### SD-07 Certificates

#### Qualifications

Qualifications and state license number of the termiticide applicator.

## 1.3 QUALIFICATIONS

For the application of pesticides, the Contractor shall use the services of a subcontractor whose principal business is pest control. The subcontractor shall be licensed and certified in the state where the work is to be performed. Termiticide applicators shall also be certified in the U.S. Environmental Protection Agency (EPA) pesticide applicator category which includes structural pest control.

#### 1.4 SAFETY REQUIREMENTS

Formulate, treat, and dispose of termiticides and their containers in accordance with label directions. Draw water for formulating only from sites designated by the Contracting Officer, and fit the filling hose with a backflow preventer meeting local plumbing codes or standards. The filling operation shall be under the direct and continuous observation of a contractor's representative to prevent overflow. Secure pesticides and related materials under lock and key when unattended. Ensure that proper protective clothing and equipment are worn and used during all phases of termiticide application. Dispose of used pesticide containers off Government property.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

##### 1.5.1 Delivery

Termiticide material shall be delivered to the site in the original unopened containers bearing legible labels indicating the EPA registration number and manufacturer's registered uses. All other materials to be used on site for the purpose of termite control shall be delivered in new or otherwise good condition as supplied by the manufacturer or formulator.

##### 1.5.2 Storage

Materials shall be stored in designated areas and in accordance with manufacturer's labels. Termiticides and related materials shall be kept under lock and key when unattended.

##### 1.5.3 Handling

Termiticides shall be handled in accordance with manufacturer's labels. Manufacturer's warnings and precautions shall be observed. Materials shall be handled preventing contamination by dirt, water, and organic material. Protect termiticides from sunlight as recommended by the manufacturer.

#### 1.6 INSPECTION

Termiticides shall be inspected upon arrival at the job site for conformity to type and quality in accordance with paragraph TERMITICIDES. Each label shall bear evidence of registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended or under appropriate regulations of the host county. Other materials shall be inspected for conformance with specified requirements. Unacceptable materials shall be removed from the job site.

#### 1.7 WARRANTY

The Contractor shall provide a 5-year written warranty against infestations or reinfestations by subterranean termites of the buildings or building additions constructed under this contract. Warranty shall include annual inspections of the buildings or building additions. If live subterranean termite infestation or subterranean termite damage is discovered during the warranty period, and the soil and building conditions have not been altered in the interim, the Contractor shall:

- a. Retreat the soil and perform other treatment as may be necessary for elimination of subterranean termite infestation;

- b. Repair damage caused by termite infestation; and
- c. Reinspect the building approximately 180 days after the retreatment.

## 1.8 QUALITY ASSURANCE

The Contractor shall comply with 7 USC Section 136 for requirements on contractor's licensing, certification, and record keeping. The Contractor shall maintain daily records using Pest Management Maintenance Record, DD Form 1532-1 and submit copies of records when requested by the Contracting Officer. These forms may be obtained from the main web site:

<http://web1.whs.osd.mil/icdhome/formsrpt/WWWDDAllbyNumber 1Page10.htm>.

Or directly from the following websites:

<http://web1.whs.osd.mil/forms/DD1532-1.pdf>

and <http://web1.whs.osd.mil/forms/DD1532.pdf>.

Upon completion of this work, submit Pest Management Report. DD Form 1532 identifying target pest, type of operation, brand name and manufacturer of pesticide, formulation, concentration or rate of application used.

## PART 2 PRODUCTS

### 2.1 TERMITICIDES

Termiticides shall be currently registered by the EPA or approved for such use by the appropriate agency of the host county. Termiticide shall be selected for maximum effectiveness and duration after application. The selected termiticide shall be suitable for the soil and climatic conditions at the project site.

## PART 3 EXECUTION

### 3.1 TECHNICAL REPRESENTATIVE

The certified installation pest management coordinator shall be the technical representative, shall be present at all meetings concerning treatment measures for subterranean termites, and may be present during treatment application. The command Pest Control Coordinator shall be contacted prior to starting work.

### 3.2 SITE PREPARATION

Site preparation shall be in accordance with Sections 02231 CLEARING AND GRUBBING, and 02300S EARTHWORK. Work related to final grades, landscape plantings, foundations, or any other alterations to finished construction which might alter the condition of treated soils, shall be coordinated with this specification.

#### 3.2.1 Ground Preparation

Food sources shall be eliminated by removing debris from clearing and grubbing and post construction wood scraps such as ground stakes, form boards, and scrap lumber from the site, before termiticide application begins.

#### 3.2.2 Verification

Before work starts, the Contractor shall verify that final grades are as indicated and smooth grading has been completed in accordance with Section

02300S EARTHWORK. Soil particles shall be finely graded with particles no larger than 1 inch and compacted to eliminate soil movement to the greatest degree.

### 3.2.3 Foundation Exterior

The Contractor shall provide written verification that final grading and landscape planting operations will not disturb treatment of the soil on the exterior sides of foundation walls, grade beams, and similar structures.

### 3.2.4 Utilities and Vents

The Contractor shall provide written verification that the location and identity of HVAC ducts and vents, water and sewer lines, and plumbing have been accomplished prior to the termiticide application.

### 3.2.5 Crawl and Plenum Air Spaces

The Contractor shall provide written verification that the location and identity of crawl and plenum air spaces have been accomplished prior to the termiticide application.

## 3.3 SITE CONDITIONS

The following conditions shall determine the time of application.

### 3.3.1 Soil Moisture

Soils to be treated shall be tested immediately before application. Soil moisture content shall be tested to a minimum depth of 3 inches. The soil moisture shall be as recommended by the termiticide manufacturer. The termiticide will not be applied when soil moisture exceeds manufacturer's recommendations because termiticides do not adhere to the soil particles in saturated soils.

### 3.3.2 Runoff and Wind Drift

Termiticide shall not be applied during or immediately following heavy rains. Applications shall not be performed when conditions may cause runoff or create an environmental hazard. Applications shall not be performed when average wind speed exceeds 10 miles per hour. The termiticide shall not be allowed to enter water systems, aquifers, or endanger humans or animals.

#### 3.3.2.1 Vapor Barriers and Waterproof Membranes

Termiticide shall be applied prior to placement of a vapor barrier or waterproof membrane.

#### 3.3.2.2 Utilities and Vents

Prior to application, HVAC ducts and vents located in treatment area shall be turned off and blocked to protect people and animals from termiticide.

### 3.3.3 Placement of Concrete

Concrete covering treated soils shall be placed as soon as the termiticide has reached maximum penetration into the soil. Time for maximum penetration shall be as recommended by the manufacturer.

### 3.4 TERMITICIDE TREATMENT

The Contractor shall submit a Termiticide Application Plan for approval before starting the specified treatment.

#### 3.4.1 Equipment Calibration and Tank Measurement

Immediately prior to commencement of termiticide application, calibration tests shall be conducted on the application equipment to be used and the application tank shall be measured to determine the volume and contents. These tests shall confirm that the application equipment is operating within the manufacturer's specifications and will meet the specified requirements. The Contractor shall provide written certification of the equipment calibration test results within 1 week of testing.

#### 3.4.2 Mixing and Application

Formulating, mixing, and application shall be performed in the presence of the Contracting Officer or the technical representative. A closed system is recommended as it prevents the termiticide from coming into contact with the applicator or other persons. Water for formulating shall only come from designated locations. Filling hoses shall be fitted with a backflow preventer meeting local plumbing codes or standards. Overflow shall be prevented during the filling operation. Prior to each day of use, the equipment used for applying termiticides shall be inspected for leaks, clogging, wear, or damage. Any repairs are to be performed immediately.

#### 3.4.3 Treatment Method

For areas to be treated, the Contractor shall establish complete and unbroken vertical and/or horizontal soil poison barriers between the soil and all portions of the intended structure which may allow termite access to wood and wood related products. Application shall not be made to areas which serve as crawl spaces or for use as a plenum air space.

##### 3.4.3.1 Surface Application

Surface application shall be used for establishing horizontal barriers. Surface applicants shall be applied as a coarse spray and provide uniform distribution over the soil surface. Termiticide shall penetrate a minimum of 1 inch into the soil, or as recommended by the manufacturer.

##### 3.4.3.2 Rodding and Trenching

Rodding and trenching shall be used for establishing vertical soil barriers. Trenching shall be to the depth of the foundation footing. Width of trench shall be as recommended by the manufacturer, or as indicated. Rodding or other approved method may be implemented for saturating the base of the trench with termiticide. Immediately after termiticide has reached maximum penetration as recommended by the manufacturer, backfilling of the trench shall commence. Backfilling shall be in 6 inch rises or layers. Each rise shall be treated with termiticide.

#### 3.4.4 Sampling

The Contracting Officer may draw from stocks at the job site, at any time and without prior notice, samples of the termiticides used to determine if the amount of active ingredient specified on the label is being applied.

### 3.5 VERIFICATION OF MEASUREMENT

Once termiticide application has been completed, tank contents shall be measured to determine the remaining volume. The total volume measurement of used contents for the application shall equal the established application rate for the project site conditions. The Contractor shall provide written verification of the measurements.

### 3.6 CLEAN UP, DISPOSAL, AND PROTECTION

Once application has been completed, the Contractor shall proceed with clean up and protection of the site without delay.

#### 3.6.1 Clean Up

The site shall be cleaned of all material associated with the treatment measures, according to label instructions, and as indicated. Excess and waste material shall be removed and disposed off site.

#### 3.6.2 Disposal of Termiticide

The Contractor shall dispose of residual termiticides and containers off Government property, and in accordance with label instructions and EPA criteria.

#### 3.6.3 Protection of Treated Area

Immediately after the application, the area shall be protected from other use by erecting barricades and providing signage as required or directed. Signage shall be placed inside the entrances to crawl spaces and shall identify the space as treated with termiticide and not safe for children and animals.

### 3.7 CONDITIONS FOR SATISFACTORY TREATMENT

#### 3.7.1 Equipment Calibrations and Measurements

Where results from the equipment calibration and tank measurements tests are unsatisfactory, re-treatment will be required.

#### 3.7.2 Testing

Should an analysis, performed by a third party, indicate that the samples of the applied termiticide contain less than the amount of active ingredient specified on the label, and/or if soils are treated to a depth less than specified or approved, re-treatment will be required.

#### 3.7.3 Disturbance of Treated Soils

Soil and fill material disturbed after treatment shall be re-treated before placement of slabs or other covering structures.

#### 3.7.4 Termites Found Within the Warranty Period

If live subterranean termite infestation or termite damage is discovered during the warranty period, the Contractor shall re-treat the site.

3.8 RE-TREATMENT

Where re-treatment is required, the Contractor shall comply with the requirements specified in paragraph WARRANTY.

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08/04

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## SECTION 02370

## SOIL SURFACE EROSION CONTROL

**08/04**

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

## ASTM INTERNATIONAL (ASTM)

|             |   |
|-------------|---|
| ASTM D 1248 | (2004) Polyethylene Plastics Extrusion Materials for Wire and Cable   |
| ASTM D 1560 | (1992; R 2000) Resistance to Deformation and Cohesion of Bituminous Mixtures by Means of Hveem Apparatus    |
| ASTM D 1777 | (1996; R 2002) Thickness of Textile Materials   |
| ASTM D 2028 | (1997; R 2004) Cutback Asphalt (Rapid-Curing Type)  |
| ASTM D 2844 | (2001e1) Resistance R-Value and Expansion Pressure of Compacted Soils                                       |
| ASTM D 3776 | (1996; R 2002) Mass Per Unit Area (Weight) of Fabric  |
| ASTM D 3787 | (2001) Bursting Strength of Textiles - Constant-Rate-of-Traverse (CRT), Ball Burst Test                     |
| ASTM D 3884 | (2001e1) Abrasion Resistance of Textile Fabrics (Rotary Platform, Double-Head Method)                       |
| ASTM D 4355 | (2002) Deterioration of Geotextiles from Exposure to Light, Moisture and Heat in a Xenon-Arc Type Apparatus |
| ASTM D 4491 | (1999a) Water Permeability of Geotextiles by Permittivity   |
| ASTM D 4533 | (1991; R 1996) Trapezoid Tearing Strength of Geotextiles  |
| ASTM D 4632 | (1991; R 2003) Grab Breaking Load and Elongation of Geotextiles   |

|             |  |
|-------------|--|
| ASTM D 4751 | (1999a) Determining Apparent Opening Size of a Geotextile                              |
| ASTM D 4833 | (2000e1) Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products  |
| ASTM D 4972 | (2001) pH of Soils   |
| ASTM D 5268 | (2002) Topsoil Used for Landscaping Purposes   |
| ASTM D 648  | (2004) Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position |
| ASTM D 977  | (2003) Emulsified Asphalt  |

U.S. DEPARTMENT OF AGRICULTURE (USDA)

|              |   |
|--------------|---|
| AMS Seed Act | (1940; R 1988; R 1998) Federal Seed Act |
|--------------|---|

## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

### SD-02 Shop Drawings

#### Erosion Control

Scale drawings defining areas to receive recommended materials as required by federal, state or local regulations.

#### Seed Establishment Period

Calendar time period for the seed establishment period. When there is more than one seed establishment period, the boundaries of the seeded area covered for each period shall be described.

#### Maintenance Record

Record of maintenance work performed, of measurements and findings for product failure, recommendations for repair, and products replaced.

### SD-03 Product Data

#### Geosynthetic Binders Hydraulic Mulch Geotextile Fabrics

Manufacturer's literature including physical characteristics, application and installation instructions.

#### Equipment

## SD-06 Test Reports

Geosynthetic Binders  
Hydraulic Mulch  
Geotextile Fabrics

Certified reports of inspections and laboratory tests, prepared by an independent testing agency, including analysis and interpretation of test results. Each report shall be properly identified. Test methods used and compliance with recognized test standards shall be described.

## SD-07 Certificates

Geotextile Fabrics

Prior to delivery of materials, certificates of compliance attesting that materials meet the specified requirements. Certified copies of the material certificates shall include the following.

For items listed in this section:

- a. Certification of recycled content or,
- b. Statement of recycled content.
- c. Certification of origin including the name, address and telephone number of manufacturer.

Seed

Classification, botanical name, common name, percent pure live seed, minimum percent germination and hard seed, maximum percent weed seed content, and date tested.

Asphalt Adhesive  
Tackifier

Composition.

Wood By-Products

Composition, source, and particle size. Products shall be free from toxic chemicals or hazardous material.

Wood Cellulose Fiber

Certification stating that wood components were obtained from managed forests.

## 1.3 DESCRIPTION OF WORK

The work shall consist of furnishing and installing soil surface erosion control materials, including fine grading, mulching and miscellaneous related work, within project limits and in areas outside the project limits where the soil surface is disturbed from work under this contract at the designated locations. This work shall include all necessary materials, labor, supervision and equipment for installation of a complete system.

This section shall be coordinated with the requirements of Section 02300S EARTHWORK and Section 02921 SEEDING.

#### 1.4 DELIVERY, INSPECTION, STORAGE, AND HANDLING

Materials shall be stored in designated areas and as recommended by the manufacturer protected from the elements, direct exposure, and damage. Containers shall not be dropped from trucks. Material shall be free of defects that would void required performance or warranty. Geosynthetic binders and synthetic soil binders shall be delivered in the manufacturer's original sealed containers and stored in a secure area.

- a. Erosion control blankets and geotextile fabric shall be furnished in rolls with suitable wrapping to protect against moisture and extended ultraviolet exposure prior to placement. Erosion control blanket and geotextile fabric rolls shall be labeled to provide identification sufficient for inventory and quality control purposes.
- b. Seed shall be inspected upon arrival at the jobsite for conformity to species and quality. Seed that is wet, moldy, or bears a test date five months or older, shall be rejected.

#### 1.5 SUBSTITUTIONS

Substitutions will not be allowed without written request and approval from the Contracting Officer.

#### 1.6 INSTALLER'S QUALIFICATION

The installer shall be certified by the manufacturer for training and experience installing the material.

#### 1.7 WARRANTY

Erosion control material shall have a warranty for use and durable condition for project specific installations. Temporary erosion control materials shall carry a minimum eighteen month warranty. Permanent erosion control materials shall carry a minimum three year warranty.

### PART 2 PRODUCTS

#### 2.1 RECYCLED PLASTIC

Recycled plastic shall contain a minimum 85 percent of recycled post-consumer product. Recycled material shall be constructed or manufactured with a maximum 1/4 inch deflection or creep in any member, according to ASTM D 648 and ASTM D 1248. The components shall be molded of ultraviolet (UV) and color stabilized polyethylene. The material shall consist of a minimum 75 percent plastic profile of high-density polyethylene, low-density polyethylene, and polypropylene raw material. The material shall be non-toxic and have no discernible contaminants such as paper, foil, or wood. The material shall contain a maximum 3 percent air voids and shall be free of splinters, chips, peels, buckling, and cracks. Material shall be resistant to deformation from solar heat gain.

## 2.2 BINDERS

### 2.2.1 Synthetic Soil Binders

Calcium chloride, or other standard manufacturer's spray on adhesives designed for dust suppression.

### 2.2.2 Geosynthetic Binders

Geosynthetic binders shall be manufactured in accordance with ASTM D 1560, ASTM D 2844; and shall be referred to as products manufactured for use as modified emulsions for the purpose of erosion control and soil stabilization. Emulsions shall be manufactured from all natural materials and provide a hard durable finish.

## 2.3 MULCH

Mulch shall be free from weeds, mold, and other deleterious materials. Mulch materials shall be native to the region.

### 2.3.1 Straw

Straw shall be stalks from oats, wheat, rye, barley, or rice, furnished in air-dry condition and with a consistency for placing with commercial mulch-blowing equipment.

### 2.3.2 Hay

Hay shall be native hay, sudan-grass hay, broomsedge hay, or other herbaceous mowings, furnished in an air-dry condition suitable for placing with commercial mulch-blowing equipment.

### 2.3.3 Wood Cellulose Fiber

Wood cellulose fiber shall not contain any growth or germination-inhibiting factors and shall be dyed an appropriate color to facilitate placement during application. Composition on air-dry weight basis: a minimum 9 to a maximum 15 percent moisture, and between a minimum 4.5 to a maximum 6.0 pH.

### 2.3.4 Paper Fiber

Paper fiber mulch shall be recycled news print that is shredded for the purpose of mulching seed.

### 2.3.5 Shredded Bark

Locally shredded material shall be treated to retard the growth of mold and fungi.

### 2.3.6 Wood By-Products

Wood locally chipped or ground bark shall be treated to retard the growth of mold and fungi. Gradation: A maximum 2 inch wide by 4 inch long.

### 2.3.7 Asphalt Adhesive

Asphalt adhesive shall conform to the following: Emulsified asphalt, conforming to ASTM D 977, Grade SS-1; and cutback asphalt, conforming to ASTM D 2028, Designation RC-70.

### 2.3.8 Mulch Control Netting

Mulch control netting may be constructed of lightweight recycled plastic, cotton, or paper or organic fiber. The recycled plastic shall be a woven or nonwoven polypropylene, nylon, or polyester containing stabilizers and/or inhibitors to make the fabric resistant to deterioration from UV, and with the following properties:

- a. Minimum grab tensile strength (TF 25 #1/ASTM D 4632), 180 pounds.
- b. Minimum Puncture (TF 25 #4/ASTM D 3787), 75 psi in the weakest direction.
- c. Apparent opening sieve size of a minimum 40 and maximum 80 (U.S. Sieve Size)..
- d. Minimum Trapezoidal tear strength (TF 25 #2/ASTM D 4533), 50 pounds.

### 2.3.9 Hydraulic Mulch

Hydraulic mulch shall be made of 100 percent virgin aspen wood fibers. Wood shall be naturally air-dried to a moisture content of 10.0 percent, plus or minus 3.0 percent. A minimum of 50 percent of the fibers shall be equal to or greater than 0.15 inch in length and a minimum of 75 percent of the fibers shall be retained on a 28 mesh screen. No reprocessed paper fibers shall be included in the hydraulic mulch. Hydraulic mulch shall have the following mixture characteristics:

| CHARACTERISTIC (typical)           | VALUE                         |
|------------------------------------|-------------------------------|
| pH                                 | 5.4 $\pm$ 0.1                 |
| Organic Matter (oven dried basis), | percent 99.3 within $\pm$ 0.2 |
| Inorganic Ash (oven dried basis),  | percent 0.7 within $\pm$ 0.2  |
| Water Holding Capacity,            | percent 1,401                 |

### 2.3.10 Dye

Dye shall be a water-activated, green color. Dye shall be pre-packaged in water dissolvable packets in the hydraulic mulch.

## 2.4 GEOTEXTILE FABRICS

Geotextile fabrics shall be woven of polypropylene filaments formed into a stable network so that the filaments retain their relative position to each other. Sewn seams shall have strength equal to or greater than the geotextile itself. Fabric shall be installed to withstand maximum velocity flows as recommended by the manufacturer. The geotextile shall conform to the following minimum average roll values:

| Property                         | Performance  | Test Method |
|----------------------------------|--------------|-------------|
| Weight                           |              | ASTM D 3776 |
| Thickness                        |              | ASTM D 1777 |
| Permeability                     |              | ASTM D 4491 |
| Abrasion Resistance,             | 58 percent X |             |
| Type (percent strength retained) | 81 percent   | ASTM D 3884 |
| Tensile Grab Strength            | 1,467 N X 1, | ASTM D 4632 |

| Property                | Performance              | Test Method |
|-------------------------|--------------------------|-------------|
|                         | 933 N                    |             |
| Grab Elongation         | 15percent X<br>20percent | ASTM D 4632 |
| Burst Strength          | 5,510 kN/m <sup>2</sup>  | ASTM D 3787 |
| Puncture Strength       | 733 N                    | ASTM D 4833 |
| Trapezoid Tear          | 533 N X 533 N            | ASTM D 4533 |
| Apparent Opening Size   | 40 US Std Sieve          | ASTM D 4751 |
| UV Resistance @ 500 hrs | 90 percent               | ASTM D 4355 |

## 2.5 EROSION CONTROL BLANKETS

### 2.5.1 Seed

#### 2.5.1.1 Seed Classification

State-certified seed of the latest season's crop shall be provided in original sealed packages bearing the producer's guaranteed analysis for percentages of mixture, purity, germination, hard seed, weed seed content, and inert material. Labels shall be in conformance with AMS Seed Act and applicable state seed laws. The Contractor shall submit the Seed Establishment Period information as specified in the Submittals paragraph.

#### 2.5.1.2 Permanent Seed Species and Mixtures

The seed species, mixtures and planting dates are indicated on the project plans.

#### 2.5.1.3 Quality

Weed seed shall be a maximum 1 percent by weight of the total mixture.

### 2.5.2 Staking

Stakes shall be 100 percent biodegradable manufactured from recycled plastic or wood and shall be designed to safely and effectively secure erosion control blankets for temporary or permanent applications. The biodegradable stake shall be fully degradable by biological activity within a reasonable time frame. The bio-plastic resin used in production of the biodegradable stake shall consist of polylactide, a natural, completely biodegradable substance derived from renewable agricultural resources. The biodegradable stake must exhibit ample rigidity to enable being driven into hard ground, with sufficient flexibility to resist shattering. The biodegradable stake shall have serrations on the leg to increase resistance to pull-out from the soil.

### 2.5.3 Staples

Staples shall be as recommended by the manufacturer.

## 2.6 WATER

Unless otherwise directed, water shall be the responsibility of the Contractor. Water shall be potable or supplied by an existing irrigation system.



## PART 3 EXECUTION

### 3.1 CONDITIONS

The Contractor shall submit a construction work sequence schedule, with the approved erosion control plan a minimum of 30 days prior to start of construction. The work schedule shall coordinate the timing of land disturbing activities with the provision of erosion control measures. Erosion control operations shall be performed under favorable weather conditions; when excessive moisture, frozen ground or other unsatisfactory conditions prevail, the work shall be stopped as directed. When special conditions warrant a variance to earthwork operations, a revised construction schedule shall be submitted for approval. Erosion control materials shall not be applied in adverse weather conditions which could affect their performance.

#### 3.1.1 Finished Grade

The Contractor shall verify that finished grades are as indicated on the drawings; finish grading and compaction shall be completed in accordance with Section 02300S EARTHWORK, prior to the commencement of the work. The location of underground utilities and facilities in the area of the work shall be verified and marked. Damage to underground utilities and facilities shall be repaired at the Contractor's expense.

### 3.2 SITE PREPARATION

#### 3.2.1 Soil Test

Soil shall be tested in accordance with ASTM D 5268 and ASTM D 4972 for determining the particle size and mechanical analysis. Sample collection onsite shall be random over the entire site. The test shall determine the soil particle size as compatible for the specified material.

#### 3.2.2 Layout

Erosion control material locations may be adjusted to meet field conditions. When soil tests result in unacceptable particle sizes, a shop drawing shall be submitted indicating the corrective measures.

#### 3.2.3 Protecting Existing Vegetation

When there are established lawns in the work area, the turf shall be covered and/or protected or replaced after construction operations. Existing trees, shrubs, and plant beds that are to be preserved shall be barricaded along the dripline. Damage to existing trees shall be mitigated by the Contractor at no additional cost to the Government. Damage shall be assessed by a state certified arborist or other approved professional using the National Arborist Association's tree valuation guideline.

#### 3.2.4 Obstructions Below Ground

When obstructions below ground affect the work, shop drawings showing proposed adjustments to placement of erosion control material shall be submitted for approval.

### 3.3 INSTALLATION

#### 3.3.1 Synthetic Binders

Synthetic binders shall be applied heaviest at edges of areas and at crests of ridges and banks to prevent displacement. Binders shall be applied to the remainder of the area evenly at the rate recommended by the manufacturer.

#### 3.3.2 Seeding

When seeding is required prior to installing mulch on synthetic grid systems the Contractor shall verify that seeding will be completed in accordance with Sections 02300S EARTHWORK and 02921 SEEDING.

#### 3.3.3 Mulch Installation

Mulch shall be installed in the areas indicated. Mulch shall be applied evenly at the rate of 5 pounds per square yard.

#### 3.3.4 Mulch Control Netting

Netting may be stapled over mulch according to manufacturer's recommendations.

#### 3.3.5 Mechanical Anchor

Mechanical anchor shall be a V-type-wheel land packer; a scalloped-disk land packer designed to force mulch into the soil surface; or other suitable equipment.

#### 3.3.6 Asphalt Adhesive Tackifier

Asphalt adhesive tackifier shall be sprayed at a rate between 10 to 13 gallons per 1000 square feet. Sunlight shall not be completely excluded from penetrating to the ground surface.

#### 3.3.7 Non-Asphaltic Tackifier

Hydrophilic colloid shall be applied at the rate recommended by the manufacturer, using hydraulic equipment suitable for thoroughly mixing with water. A uniform mixture shall be applied over the area.

#### 3.3.8 Asphalt Adhesive Coated Mulch

Hay or straw mulch may be spread simultaneously with asphalt adhesive applied at a rate between 10 to 13 gallons per 1000 square feet, using power mulch equipment which shall be equipped with suitable asphalt pump and nozzle. The adhesive-coated mulch shall be applied evenly over the surface. Sunlight shall not be completely excluded from penetrating to the ground surface.

#### 3.3.9 Wood Cellulose Fiber, Paper Fiber, and Recycled Paper

Wood cellulose fiber, paper fiber, or recycled paper shall be applied as part of the hydraulic mulch operation.

### 3.4 CLEAN-UP

Excess material, debris, and waste materials shall be disposed offsite at an approved landfill or recycling center. Adjacent paved areas shall be cleared. Immediately upon completion of the installation in an area, the area shall be protected against traffic or other use by erecting barricades and providing signage as required, or as directed.

### 3.5 WATERING SEED

Watering shall be started immediately after seed installation. Water shall be applied to supplement rainfall at a sufficient rate to ensure moist soil conditions to a minimum 1 inch depth. Run-off and puddling shall be prevented. Watering trucks shall not be driven over turf areas, unless otherwise directed. Watering of other adjacent areas or plant material shall be prevented.

### 3.6 MAINTENANCE RECORD

A record shall be furnished describing the maintenance work performed, record of measurements and findings for product failure, recommendations for repair, and products replaced.

#### 3.6.1 Maintenance

Maintenance shall include eradicating weeds; protecting embankments and ditches from surface erosion; maintaining the performance of the erosion control materials and mulch; protecting installed areas from traffic.

##### 3.6.1.1 Maintenance Instructions

Written instructions containing drawings and other necessary information shall be furnished, describing the care of the installed material; including, when and where maintenance should occur, and the procedures for material replacement.

##### 3.6.1.2 Patching and Replacement

Unless otherwise directed, material shall be placed, seamed or patched as recommended by the manufacturer. Material not meeting the required performance as a result of placement, seaming or patching shall be removed from the site. The Contractor shall replace the unacceptable material at no additional cost to the Government.

### 3.7 SATISFACTORY STAND OF GRASS PLANTS

The grass plants shall be evaluated for species and health when the grass plants are a minimum 1 inch high. A satisfactory stand of grass plants shall be a minimum 10 grass plants per square foot. The total bare spots shall not exceed 2 percent of the total area.

-- End of Section --

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## SECTION 02621

## FOUNDATION DRAINAGE SYSTEM

08/04

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS  
(AASHTO)

AASHTO M 252M (1996) Corrugated Polyethylene Drainage  
Tubing

AASHTO M 294 (2003) Corrugated Polyethylene Pipe, 305-  
to 915-mm (12- to 36 in.) Diameter

ASTM INTERNATIONAL (ASTM)

ASTM C 33 (2003) Concrete Aggregates

ASTM D 3034 (2004) Type PSM Poly(Vinyl Chloride) (PVC)  
Sewer Pipe and Fittings

ASTM D 3212 (1996a; R 2003) Joints for Drain and Sewer  
Plastic Pipes Using Flexible Elastomeric  
Seals

ASTM F 405 (1997) Corrugated Polyethylene (PE) Tubing  
and Fittings

ASTM F 667 (1997) Large Diameter Corrugated  
Polyethylene Pipe and Fittings

ASTM F 758 (1995; R 2000) Smooth-Wall Poly(Vinyl  
Chloride) (PVC) Plastic Underdrain Systems  
for Highway, Airport, and Similar Drainage

ASTM F 949 (2003) Poly(Vinyl Chloride) (PVC)  
Corrugated Sewer Pipe with a Smooth  
Interior and Fittings

## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

## Materials.

Certifications from the manufacturers attesting that materials meet specification requirements.

### 1.3 DELIVERY, STORAGE AND HANDLING

Materials placed in storage shall be stored with protection from the weather, humidity and temperature variations, dirt and dust, or other contaminants. Plastic pipe shall not be exposed to direct sunlight for more than 6 months from time of manufacturer to installation.

## PART 2 PRODUCTS

### 2.1 MATERIALS

Pipe for foundation drainage system shall be of the type and size indicated. Appropriate transitions, adapters, or joint details shall be used where pipes of different types or materials are connected.

#### 2.1.1 Plastic Pipe

Plastic pipe shall contain ultraviolet inhibitor to provide protection from exposure to direct sunlight.

##### 2.1.1.1 Corrugated Polyethylene (PE) Drainage Pipe

The Contractor shall furnish ASTM F 405 heavy duty for pipe 3 to 6 inches in diameter inclusive, ASTM F 667 for pipe 8 to 24 inches in diameter; or AASHTO M 252M for pipe 3 to 10 inches in diameter or AASHTO M 294 for pipe 12 to 24 inches in diameter. Fittings shall be pipe manufacturer's standard type and shall conform to the indicated specification.

##### 2.1.1.2 Polyvinyl Chloride (PVC) Pipe

ASTM F 758, Type PS 46, ASTM D 3034, or ASTM F 949 with a minimum pipe stiffness of 46 psi.

##### 2.1.1.3 Circular Perforations in Plastic Pipe

Circular holes shall be cleanly cut, not more than 5/16 inch or less than 3/16 inch in diameter, and arranged in rows parallel to the longitudinal axis of the pipe. Perforations shall be approximately 3 inches apart, center-to-center, along rows. The rows shall be approximately 1-1/2 inches apart and arranged in a staggered pattern so that all perforations lie at the midpoint between perforations in adjacent rows. The rows shall be spaced over not more than 155 degrees of circumference. The spigot or tongue end of the pipe shall not be perforated for a length equal to the depth of the socket and perforations shall continue at uniform spacing over the entire length of the pipe. Manufacturer's standard perforated pipe which essentially meets these requirements may be used with prior approval of the Contracting Officer.

##### 2.1.1.4 Slotted Perforations in Plastic Pipe

Circumferential slots shall be cleanly cut so as not to restrict the inflow of water and uniformly spaced along the length and circumference of the tubing. Width of slots shall not exceed 1/8 inch or be less than 1/32

inch. The length of individual slots shall not exceed 1-1/4 inches on 3 inch diameter tubing; 10 percent of the tubing inside nominal circumference on 4 to 8 inch diameter tubing; and 2-1/2 inches on 10 inch diameter tubing. Rows of slots shall be symmetrically spaced so that they are fully contained in quadrants of the pipe. Slots shall be centered in the valleys of the corrugations of profile wall pipe. The water inlet area shall be a minimum of 0.5 square inch per linear foot of tubing. Manufacturer's standard perforated pipe which essentially meets these requirements may be used with prior approval of the Contracting Officer.

#### 2.1.2 Fittings

Fittings shall be of compatible materials for pipe, of corresponding weight and quality, and as specified herein.

#### 2.1.3 Cleanouts and Piping Through Walls

Cleanout pipe and fittings and piping through walls and footings shall be cast-iron soil pipe. Each cleanout shall have a brass ferrule and a cast-brass screw-jointed plug with socket or raised head for wrench.

#### 2.1.4 Cover and Wrapping Materials for Open Joints in Drain Tile

Cover material may be tar paper, roofing paper, reinforced building paper, glass fiber fabric, or other similar type material. Wrapping material shall be 18-14 mesh, 0.01 inch diameter nonferrous wire cloth.

#### 2.1.5 Bedding and Pervious Backfill for Foundation Drains

Bedding and pervious backfill shall be coarse aggregate conforming to ASTM C 33, size number 4 inch.

### PART 3 EXECUTION

#### 3.1 GENERAL REQUIREMENTS

##### 3.1.1 Extent

Foundation drainage shall be furnished and installed as a complete system to 5 feet beyond the building as shown.

##### 3.1.2 Outlet Connections

Foundation pipe shall be terminated as shown.

##### 3.1.3 Drainage Lines

Drainage lines shall be constructed of perforated pipe.

##### 3.1.4 Outlet Lines

Outlet lines shall be constructed of closed-joint nonperforated, nonporous pipe.

#### 3.2 INSTALLATION

##### 3.2.1 Trenching and Excavation

Required trenching and excavation shall be in accordance with Section 02300S

EARTHWORK. Trenches shall be kept dry during installation of drainage system. Changes in direction of drain lines shall be made with 1/8 bends. Wye fittings shall be used at intersections.

### 3.2.2 Bedding

Graded bedding, minimum 6 inches in depth, shall be placed in the bottom of trench for its full width and length and compacted as specified prior to laying of foundation drain pipe. Each section shall rest firmly upon the bedding, through the entire length, with recesses formed for bell joints. Except for recesses for bell joints, the bedding shall fully support the lower quadrant of the pipe.

### 3.2.3 Pipe Laying

Drain lines shall be laid to true grades and alignment with a continuous fall in the direction of flow. Bells of pipe sections shall face upgrade. Interior of pipe shall be cleaned thoroughly before being laid. When drain lines are left open for connection to discharge lines, the open ends shall be temporarily closed and the location marked with wooden stakes. Perforated pipe shall be laid with perforations facing down. Any length that has had its grade or joints disturbed shall be removed and relaid at no additional cost to the Government. Perforated corrugated polyethylene drainage tubing and plastic piping shall be installed in accordance with manufacturer's specifications and as specified herein. Tubing and piping with physical imperfections shall not be installed.

### 3.2.4 Jointing

#### 3.2.4.1 Perforated and Porous Pipes

Perforated types of drain pipes shall be laid with closed joints.

#### 3.2.4.2 PVC Pipe

PVC pipe joints shall be in accordance with ASTM D 3034, ASTM D 3212, or ASTM F 949.

#### 3.2.4.3 Corrugated Polyethylene

Corrugated polyethylene (PE) pipe joints shall be in accordance with ASTM F 405 or ASTM F 667.

### 3.2.5 Backfilling

After joints and connections have been inspected and approved, the specified pervious backfill material shall be placed 6 inches on each side of the pipe for the full width of the trench and full width between pipe and adjacent walls and 12 inches above the top of the pipe. The backfill shall be placed preventing displacement of or injury to the pipe. A protective covering shall be placed over the pervious backfill for the full width of the trench before regular backfill is placed. Backfill shall be compacted as specified in Section 02300S EARTHWORK.

### 3.2.6 Cleanouts

Cleanouts shall be provided in locations indicated. Cleanouts in unpaved areas shall be set in 12 by 12 by 4 inch concrete blocks.

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## SECTION 02630

## STORM DRAINAGE

07/03

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS  
(AASHTO)

AASHTO M 198 (2003) Joints for Concrete Pipe, Manholes,  
and Precast Box Sections Using Preformed  
Flexible Joint Sealants

ASTM INTERNATIONAL (ASTM)

ASTM A 48/A 48M (2003) Gray Iron Castings

ASTM A 536 (1984; R 2004) Ductile Iron Castings

ASTM B 26/B 26M (2003) Aluminum-Alloy Sand Castings

ASTM C 139 (2003) Concrete Masonry Units for  
Construction of Catch Basins and Manholes

ASTM C 231 (2004) Air Content of Freshly Mixed  
Concrete by the Pressure Method

ASTM C 270 (2004a) Mortar for Unit Masonry

ASTM C 32 (2004) Sewer and Manhole Brick (Made from  
Clay or Shale)

ASTM C 425 (2004) Compression Joints for Vitrified  
Clay Pipe and Fittings

ASTM C 443 (2003) Joints for Concrete Pipe and  
Manholes, Using Rubber Gaskets

ASTM C 478 (2003a) Precast Reinforced Concrete  
Manhole Sections

ASTM C 55 (2003) Concrete Brick

ASTM C 62 (2004) Building Brick (Solid Masonry Units  
Made from Clay or Shale)

ASTM C 789 (2000) Precast Reinforced Concrete Box  
Sections for Culverts, Storm Drains, and  
Sewers

|             |   |
|-------------|---|
| ASTM C 923  | (2002) Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Laterals  |
| ASTM D 1056 | (2000) Flexible Cellular Materials - Sponge or Expanded Rubber  |
| ASTM D 1171 | (1999) Rubber Deterioration - Surface Ozone Cracking Outdoors or Chamber (Triangular Specimens)                                       |
| ASTM D 1557 | (2002e1) Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/cu. ft. (2,700 kN-m/cu.m.))               |
| ASTM D 1751 | (1999) Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types) |
| ASTM D 1752 | (2004a) Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction                      |
| ASTM D 2922 | (2004) Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)   |
| ASTM D 3017 | (2004) Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)   |

## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

### SD-03 Product Data

#### Placing Pipe

Printed copies of the manufacturer's recommendations for installation procedures of the material being placed, prior to installation.

### SD-07 Certificates

Resin Certification  
Pipeline Testing  
Hydrostatic Test on Watertight Joints  
Determination of Density  
Frame and Cover for Gratings

Certified copies of test reports demonstrating conformance to applicable pipe specifications, before pipe is installed. Certification on the ability of frame and cover or gratings to carry the imposed live load.

### 1.3 DELIVERY, STORAGE, AND HANDLING

#### 1.3.1 Delivery and Storage

Materials delivered to site shall be inspected for damage, unloaded, and stored with a minimum of handling. Materials shall not be stored directly on the ground. The inside of pipes and fittings shall be kept free of dirt and debris. Before, during, and after installation, plastic pipe and fittings shall be protected from any environment that would result in damage or deterioration to the material. The Contractor shall have a copy of the manufacturer's instructions available at the construction site at all times and shall follow these instructions unless directed otherwise by the Contracting Officer. Solvents, solvent compounds, lubricants, elastomeric gaskets, and any similar materials required to install plastic pipe shall be stored in accordance with the manufacturer's recommendations and shall be discarded if the storage period exceeds the recommended shelf life. Solvents in use shall be discarded when the recommended pot life is exceeded.

#### 1.3.2 Handling

Materials shall be handled in a manner that ensures delivery to the trench in sound, undamaged condition. Pipe shall be carried to the trench, not dragged.

## PART 2 PRODUCTS

### 2.1 PIPE FOR CULVERTS AND STORM DRAINS

Pipe for culverts and storm drains shall, unless otherwise indicated on the plans, be reinforced concrete pipe conforming to the requirements of ASTM C76, Class III or IV.

### 2.2 DRAINAGE STRUCTURES

#### 2.2.1 Precast Reinforced Concrete Box

Boxes subjected to highway loadings shall conform to ASTM C 789.

### 2.3 MISCELLANEOUS MATERIALS

#### 2.3.1 Concrete

Unless otherwise specified, concrete and reinforced concrete shall conform to the requirements for 4000 psi concrete. The concrete mixture shall have air content by volume of concrete, based on measurements made immediately after discharge from the mixer, of 5 to 7 percent when maximum size of coarse aggregate exceeds 1-1/2 inches. Air content shall be determined in accordance with ASTM C 231. The concrete covering over steel reinforcing shall not be less than 1 inch thick for covers and not less than 1-1/2 inches thick for walls and flooring. Concrete covering deposited directly against the ground shall have a thickness of at least 3 inches between steel and ground. Expansion-joint filler material shall conform to ASTM D 1751, or ASTM D 1752, or shall be resin-impregnated fiberboard conforming to the physical requirements of ASTM D 1752.

### 2.3.2 Mortar

Mortar for pipe joints, connections to other drainage structures, and brick or block construction shall conform to ASTM C 270, Type M, except that the maximum placement time shall be 1 hour. The quantity of water in the mixture shall be sufficient to produce a stiff workable mortar but in no case shall exceed 7-1/2 gallons of water per sack of cement. Water shall be clean and free of harmful acids, alkalies, and organic impurities. The mortar shall be used within 30 minutes after the ingredients are mixed with water. The inside of the joint shall be wiped clean and finished smooth. The mortar head on the outside shall be protected from air and sun with a proper covering until satisfactorily cured.

### 2.3.3 Precast Concrete Segmental Blocks

Precast concrete segmental block shall conform to ASTM C 139, not more than 8 inches thick, not less than 8 inches long, and of such shape that joints can be sealed effectively and bonded with cement mortar.

### 2.3.4 Brick

Brick shall conform to ASTM C 62, Grade SW; ASTM C 55, Grade S-I or S-II; or ASTM C 32, Grade MS. Mortar for jointing and plastering shall consist of one part portland cement and two parts fine sand. Lime may be added to the mortar in a quantity not more than 25 percent of the volume of cement. The joints shall be filled completely and shall be smooth and free from surplus mortar on the inside of the structure. Brick structures shall be plastered with 1/2 inch of mortar over the entire outside surface of the walls. For square or rectangular structures, brick shall be laid in stretcher courses with a header course every sixth course. For round structures, brick shall be laid radially with every sixth course a stretcher course.

### 2.3.5 Precast Reinforced Concrete Manholes

Precast reinforced concrete manholes shall conform to ASTM C 478. Joints between precast concrete risers and tops shall be made with flexible watertight, rubber-type gaskets meeting the requirements of paragraph JOINTS.

### 2.3.6 Frame and Cover for Gratings

Frame and cover for gratings shall be cast gray iron, ASTM A 48/A 48M, Class 35B; cast ductile iron, ASTM A 536, Grade 65-45-12; or cast aluminum, ASTM B 26/B 26M, Alloy 356.OT6. Weight, shape, size, and waterway openings for grates and curb inlets shall be as indicated on the plans.

### 2.3.7 Joints

#### 2.3.7.1 Flexible Watertight Joints

- a. Materials: Flexible watertight joints shall be made with plastic or rubber-type gaskets for concrete pipe and with factory-fabricated resilient materials for clay pipe. The design of joints and the physical requirements for plastic gaskets shall conform to AASHTO M 198, and rubber-type gaskets shall conform to ASTM C 443. Factory-fabricated resilient joint materials shall conform to ASTM C 425. Gaskets shall have not more than one factory-fabricated splice, except that two factory-fabricated

splices of the rubber-type gasket are permitted if the nominal diameter of the pipe being gasketed exceeds 54 inches.

- b. Test Requirements: Watertight joints shall be tested and shall meet test requirements of paragraph HYDROSTATIC TEST ON WATERTIGHT JOINTS. Rubber gaskets shall comply with the oil resistant gasket requirements of ASTM C 443. Certified copies of test results shall be delivered to the Contracting Officer before gaskets or jointing materials are installed. Alternate types of watertight joint may be furnished, if specifically approved.

#### 2.3.7.2 Flexible Watertight, Gasketed Joints

- a. Gaskets: When infiltration or exfiltration is a concern for pipe lines, the couplings may be required to have gaskets. The closed-cell expanded rubber gaskets shall be a continuous band approximately 7 inches wide and approximately 3/8 inch thick, meeting the requirements of ASTM D 1056, Type 2 A1, and shall have a quality retention rating of not less than 70 percent when tested for weather resistance by ozone chamber exposure, Method B of ASTM D 1171. Rubber O-ring gaskets shall be 13/16 inch in diameter for pipe diameters of 36 inches or smaller and 7/8 inch in diameter for larger pipe having 1/2 inch deep end corrugation. Rubber O-ring gaskets shall be 1-3/8 inches in diameter for pipe having 1 inch deep end corrugations. O-rings shall meet the requirements of AASHTO M 198 or ASTM C 443. Flexible plastic gaskets shall conform to requirements of AASHTO M 198, Type B.
- b. Connecting Bands: Connecting bands shall be of the type, size and sheet thickness of band, and the size of angles, bolts, rods and lugs as indicated or where not indicated as specified in the applicable standards or specifications for the pipe. Exterior rivet heads in the longitudinal seam under the connecting band shall be countersunk or the rivets shall be omitted and the seam welded. Watertight joints shall be tested and shall meet the test requirements of paragraph HYDROSTATIC TEST ON WATERTIGHT JOINTS.

#### 2.4 DOWNSPOUT BOOTS

Boots used to connect exterior downspouts to the storm-drainage system shall be of gray cast iron conforming to ASTM A 48/A 48M, Class 30B or 35B. Shape and size shall be as indicated.

#### 2.5 RESILIENT CONNECTORS

Flexible, watertight connectors used for connecting pipe to manholes and inlets shall conform to ASTM C 923.

#### 2.6 HYDROSTATIC TEST ON WATERTIGHT JOINTS

##### 2.6.1 Concrete Pipe

A hydrostatic test shall be made on the watertight joint types as proposed. Only one sample joint of each type needs testing; however, if the sample joint fails because of faulty design or workmanship, an additional sample joint may be tested. During the test period, gaskets or other jointing material shall be protected from extreme temperatures which might adversely affect the performance of such materials. Performance requirements for joints in reinforced and nonreinforced concrete pipe shall conform to



AASHTO M 198 or ASTM C 443.

## 2.7 EROSION CONTROL RIPRAP

Provide nonerodible rock not exceeding 10 inches in its greatest dimension and choked with sufficient small rocks to provide a dense mass with a minimum thickness of 12 inches.

## PART 3 EXECUTION

### 3.1 EXCAVATION FOR PIPE CULVERTS, STORM DRAINS, AND DRAINAGE STRUCTURES

Excavation of trenches, and for appurtenances and backfilling for culverts and storm drains, shall be in accordance with the applicable portions of Section 02300S EARTHWORK and the requirements specified below.

#### 3.1.1 Trenching

The width of trenches at any point below the top of the pipe shall be not greater than the outside diameter of the pipe plus 24 inches to permit satisfactory jointing and thorough tamping of the bedding material under and around the pipe. Sheeting and bracing, where required, shall be placed within the trench width as specified. Contractor shall not overexcavate. Where trench widths are exceeded, redesign with a resultant increase in cost of stronger pipe or special installation procedures will be necessary.

Cost of this redesign and increased cost of pipe or installation shall be borne by the Contractor without additional cost to the Government.

#### 3.1.2 Removal of Unstable Material

Where wet or otherwise unstable soil incapable of properly supporting the pipe, as determined by the Contracting Officer, is unexpectedly encountered in the bottom of a trench, such material shall be removed to the depth required and replaced to the proper grade with select granular material, compacted as provided in paragraph BACKFILLING. When removal of unstable material is due to the fault or neglect of the Contractor while performing shoring and sheeting, water removal, or other specified requirements, such removal and replacement shall be performed at no additional cost to the Government.

### 3.2 BEDDING

The bedding surface for the pipe shall provide a firm foundation of uniform density throughout the entire length of the pipe.

#### 3.2.1 Concrete Pipe Requirements

When no bedding class is specified or detailed on the drawings, concrete pipe shall be bedded in a soil foundation accurately shaped and rounded to conform to the lowest one-fourth of the outside portion of circular pipe or to the lower curved portion of pipe arch for the entire length of the pipe or pipe arch. When necessary, the bedding shall be tamped. Bell holes and depressions for joints shall be not more than the length, depth, and width required for properly making the particular type of joint.

### 3.3 PLACING PIPE

Each pipe shall be thoroughly examined before being laid; defective or damaged pipe shall not be used. Plastic pipe shall be protected from

exposure to direct sunlight prior to laying, if necessary to maintain adequate pipe stiffness and meet installation deflection requirements. Pipelines shall be laid to the grades and alignment indicated. Proper facilities shall be provided for lowering sections of pipe into trenches. Lifting lugs in vertically elongated metal pipe shall be placed in the same vertical plane as the major axis of the pipe. Pipe shall not be laid in water, and pipe shall not be laid when trench conditions or weather are unsuitable for such work. Diversion of drainage or dewatering of trenches during construction shall be provided as necessary.

### 3.3.1 Concrete Pipe

Laying shall proceed upgrade with spigot ends of bell-and-spigot pipe and tongue ends of tongue-and-groove pipe pointing in the direction of the flow.

### 3.3.2 Elliptical and Elliptical Reinforced Concrete Pipe

The manufacturer's reference lines, designating the top of the pipe, shall be within 5 degrees of a vertical plane through the longitudinal axis of the pipe, during placement. Damage to or misalignment of the pipe shall be prevented in all backfilling operations.

### 3.3.3 Multiple Culverts

Where multiple lines of pipe are installed, adjacent sides of pipe shall be at least half the nominal pipe diameter or 3 feet apart, whichever is less.

## 3.4 JOINTING

### 3.4.1 Concrete Pipe

#### 3.4.1.1 Flexible Watertight Joints

Gaskets and jointing materials shall be as recommended by the particular manufacturer in regard to use of lubricants, cements, adhesives, and other special installation requirements. Surfaces to receive lubricants, cements, or adhesives shall be clean and dry. Gaskets and jointing materials shall be affixed to the pipe not more than 24 hours prior to the installation of the pipe, and shall be protected from the sun, blowing dust, and other deleterious agents at all times. Gaskets and jointing materials shall be inspected before installing the pipe; any loose or improperly affixed gaskets and jointing materials shall be removed and replaced. The pipe shall be aligned with the previously installed pipe, and the joint pushed home. If, while the joint is being made the gasket becomes visibly dislocated the pipe shall be removed and the joint remade.

#### 3.4.1.2 External Sealing Band Joint for Noncircular Pipe

Surfaces to receive sealing bands shall be dry and clean. Bands shall be installed in accordance with manufacturer's recommendations.

## 3.5 DRAINAGE STRUCTURES

### 3.5.1 Manholes and Inlets

Construction shall be of reinforced concrete, plain concrete, brick, precast reinforced concrete, precast concrete segmental blocks, complete with frames and covers or gratings; and with fixed galvanized steel ladders where indicated. Pipe connections to concrete manholes and inlets shall be

made with flexible, watertight connectors.

### 3.5.2 Walls and Headwalls

Construction shall be as indicated.

## 3.6 STEEL LADDER INSTALLATION

Ladder shall be adequately anchored to the wall by means of steel inserts spaced not more than 6 feet vertically, and shall be installed to provide at least 6 inches of space between the wall and the rungs. The wall along the line of the ladder shall be vertical for its entire length.

## 3.7 BACKFILLING

### 3.7.1 Backfilling Pipe in Trenches

After the pipe has been properly bedded, selected material from excavation or borrow, at a moisture content that will facilitate compaction, shall be placed along both sides of pipe in layers not exceeding 6 inches in compacted depth. The backfill shall be brought up evenly on both sides of pipe for the full length of pipe. The fill shall be thoroughly compacted under the haunches of the pipe. Each layer shall be thoroughly compacted with mechanical tampers or rammers. This method of filling and compacting shall continue until the fill has reached an elevation of at least 12 inches above the top of the pipe. The remainder of the trench shall be backfilled and compacted by spreading and rolling or compacted by mechanical rammers or tampers in layers not exceeding 12 inches. Tests for density shall be made as necessary to ensure conformance to the compaction requirements specified below. Where it is necessary, in the opinion of the Contracting Officer, that sheeting or portions of bracing used be left in place, the contract will be adjusted accordingly. Untreated sheeting shall not be left in place beneath structures or pavements.

### 3.7.2 Backfilling Pipe in Fill Sections

For pipe placed in fill sections, backfill material and the placement and compaction procedures shall be as specified below. The fill material shall be uniformly spread in layers longitudinally on both sides of the pipe, not exceeding 6 inches in compacted depth, and shall be compacted by rolling parallel with pipe or by mechanical tamping or ramming. Prior to commencing normal filling operations, the crown width of the fill at a height of 12 inches above the top of the pipe shall extend a distance of not less than twice the outside pipe diameter on each side of the pipe or 12 feet, whichever is less. After the backfill has reached at least 12 inches above the top of the pipe, the remainder of the fill shall be placed and thoroughly compacted in layers not exceeding 12 inches.

### 3.7.3 Movement of Construction Machinery

When compacting by rolling or operating heavy equipment parallel with the pipe, displacement of or injury to the pipe shall be avoided. Movement of construction machinery over a culvert or storm drain at any stage of construction shall be at the Contractor's risk. Any damaged pipe shall be repaired or replaced.

### 3.7.4 Compaction

#### 3.7.4.1 General Requirements

Cohesionless materials include gravels, gravel-sand mixtures, sands, and gravelly sands. Cohesive materials include clayey and silty gravels, gravel-silt mixtures, clayey and silty sands, sand-clay mixtures, clays, silts, and very fine sands. When results of compaction tests for moisture-density relations are recorded on graphs, cohesionless soils will show straight lines or reverse-shaped moisture-density curves, and cohesive soils will show normal moisture-density curves.

#### 3.7.4.2 Minimum Density

Backfill over and around the pipe and backfill around and adjacent to drainage structures shall be compacted at the approved moisture content to the following applicable minimum density, which will be determined as specified below.

- a. Under streets, parking areas, and similar-use pavements including adjacent shoulder areas, the density shall be not less than 100 percent of maximum density up to the elevation where requirements for pavement subgrade materials and compaction shall control.
- b. Under unpaved or turfed traffic areas, density shall not be less than 100 percent of maximum density for cohesionless material.
- c. Under nontraffic areas, density shall be not less than that of the surrounding material.

#### 3.7.5 Determination of Density

Testing shall be the responsibility of the Contractor and performed at no additional cost to the Government. Testing shall be performed by an approved commercial testing laboratory or by the Contractor subject to approval. Tests shall be performed in sufficient number to ensure that specified density is being obtained. Laboratory tests for moisture-density relations shall be made in accordance with ASTM D 1557 except that mechanical tampers may be used provided the results are correlated with those obtained with the specified hand tamper. Field density tests shall be determined in accordance with ASTM D 2922. When ASTM D 2922 is used, the calibration curves shall be checked and adjusted, if necessary, using the sand cone method as described in paragraph Calibration of the referenced publications. ASTM D 2922 results in a wet unit weight of soil and when using this method ASTM D 3017 shall be used to determine the moisture content of the soil. The calibration curves furnished with the moisture gauges shall be checked along with density calibration checks as described in ASTM D 3017 or ASTM D 2922. Test results shall be furnished the Contracting Officer. The calibration checks of both the density and moisture gauges shall be made at the beginning of a job on each different type of material encountered and at intervals as directed.

### 3.8 FIELD PAINTING

After installation, clean cast-iron frames, covers, gratings, and steps not buried in masonry or concrete to bare metal of mortar, rust, grease, dirt, and other deleterious materials and apply a coat of bituminous paint.

-- End of Section --



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## DIVISION 02 - SITE CONSTRUCTION

## SECTION 02731

## AGGREGATE SURFACE COURSE

**08/04**

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## SECTION 02731

## AGGREGATE SURFACE COURSE

**08/04**

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

## ASTM INTERNATIONAL (ASTM)

|             |   |
|-------------|---|
| ASTM C 117  | (2004) Materials Finer Than 75 micrometer (No. 200) Sieve in Mineral Aggregates by Washing  |
| ASTM C 131  | (2003) Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine                                 |
| ASTM C 136  | (2004) Sieve Analysis of Fine and Coarse Aggregates   |
| ASTM D 1556 | (2000) Density and Unit Weight of Soil in Place by the Sand-Cone Method   |
| ASTM D 1557 | (2002e1) Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/cu. ft. (2,700 kN-m/cu.m.))                           |
| ASTM D 2922 | (2004) Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)   |
| ASTM D 3017 | (2004) Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)   |
| ASTM D 3740 | (2004) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction |
| ASTM D 422  | (1963; R 2002) Particle-Size Analysis of Soils  |
| ASTM D 4318 | (2000) Liquid Limit, Plastic Limit, and Plasticity Index of Soils   |
| ASTM D 75   | (2003) Sampling Aggregates  |
| ASTM E 11   | (2004) Wire Cloth and Sieves for Testing Purposes   |

## 1.2 DEGREE OF COMPACTION

Degree of compaction is a percentage of the maximum density obtained by the test procedure presented in ASTM D 1557 abbreviated herein as present laboratory maximum density.

## 1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

### SD-06 Test Reports

#### Sampling and Testing Density Tests

Calibration curves and related test results prior to using the device or equipment being calibrated. Copies of field test results within 24 hours after the tests are performed. Test results from samples, not less than 30 days before material is required for the work. Results of laboratory tests for quality control purposes, for approval, prior to using the material.

## 1.4 EQUIPMENT

All plant, equipment, and tools used in the performance of the work covered by this section will be subject to approval by the Contracting Officer before the work is started and shall be maintained in satisfactory working condition at all times. The equipment shall be adequate and shall have the capability of producing the required compaction, and meeting the grade controls, thickness controls, and smoothness requirements set forth herein.

## 1.5 SAMPLING AND TESTING

Sampling and testing shall be the responsibility of the Contractor. Sampling and testing shall be performed by an approved commercial testing laboratory or by the Contractor, subject to approval. If the Contractor elects to establish its own testing facilities, approval of such facilities will be based on compliance with ASTM D 3740. No work requiring testing will be permitted until the Contractor's facilities have been inspected and approved.

### 1.5.1 Sampling

Sampling for material gradation, liquid limit, and plastic limit tests shall be taken in conformance with ASTM D 75. When deemed necessary, the sampling will be observed by the Contracting Officer.

### 1.5.2 Testing

#### 1.5.2.1 Gradation

Aggregate gradation shall be made in conformance with ASTM C 117, ASTM C 136, and ASTM D 422. Sieves shall conform to ASTM E 11.



#### 1.5.2.2 Liquid Limit and Plasticity Index

Liquid limit and plasticity index shall be determined in accordance with ASTM D 4318.

#### 1.5.3 Approval of Materials

The source of the material to be used for producing aggregates shall be selected 30 days prior to the time the material will be required in the work. Approval of sources not already approved by the Corps of Engineers will be based on an inspection by the Contracting Officer. Tentative approval of materials will be based on appropriate test results on the aggregate source. Final approval of the materials will be based on tests for gradation, liquid limit, and plasticity index performed on samples taken from the completed and compacted surface course.

#### 1.6 WEATHER LIMITATIONS

Aggregate surface courses shall not be constructed when the ambient temperatures is below 35 degrees F and on subgrades that are frozen or contain frost. It shall be the responsibility of the Contractor to protect, by approved method or methods, all areas of surfacing that have not been accepted by the Contracting Officer. Surfaces damaged by freeze, rainfall, or other weather conditions shall be brought to a satisfactory condition by the Contractor.

### PART 2 PRODUCTS

#### 2.1 AGGREGATES

Aggregates shall consist of clean, sound, durable particles of natural gravel, crushed gravel, crushed stone, sand, soil, or other approved materials processed and blended or naturally combined. Aggregates shall be free from lumps and balls of clay, organic matter, objectionable coatings, and other foreign materials. The Contractor shall be responsible for obtaining materials that meet the specification and can be used to meet the grade and smoothness requirements specified herein after all compaction and proof rolling operations have been completed.

##### 2.1.1 Coarse Aggregates

The material retained on the No. 4 sieve shall be known as coarse aggregate. Coarse aggregates shall be reasonably uniform in density and quality. The coarse aggregate shall have a percentage of wear not to exceed 50 percent after 500 revolutions as determined by ASTM C 131. The amount of flat and/or elongated particles shall not exceed 20 percent. A flat particle is one having a ratio of width to thickness greater than three; an elongated particle is one having a ratio of length to width greater than three. When the coarse aggregate is supplied from more than one source, aggregate from each source shall meet the requirements set forth herein.

##### 2.1.2 Fine Aggregates

The material passing the No. 4 sieve shall be known as fine aggregate. Fine aggregate shall consist of screenings, sand, soil, or other finely divided mineral matter that is processed or naturally combined with the coarse aggregate.

### 2.1.3 Gradation Requirements

Gradation requirements specified in TABLE I shall apply to the completed aggregate surface. It shall be the responsibility of the Contractor to obtain materials that will meet the gradation requirements after mixing, placing, compacting, and other operations. TABLE I shows permissible gradings for granular material used in aggregate surface roads. Sieves shall conform to ASTM E 11.

TABLE I. GRADATION FOR AGGREGATE SURFACE COURSES

| Sieve Designation | No. 1 | No. 2  |
|-------------------|-------|--------|
| 1 in.             | 100   | 100    |
| 3/8 in.           | 50-85 | 60-100 |
| No. 4             | 35-65 | 50-85  |
| No. 10            | 25-50 | 40-70  |
| No. 40            | 15-30 | 24-45  |
| No. 200           | 8-15  | 8-15   |

### 2.2 LIQUID LIMIT AND PLASTICITY INDEX REQUIREMENTS

The portion of the completed aggregate surface course passing the No. 40 sieve shall have a maximum liquid limit of 35 and a plasticity index of 4 to 9.

## PART 3 EXECUTION

### 3.1 OPERATION OF AGGREGATE SOURCES

Clearing, stripping, and excavating shall be the responsibility of the Contractor. The aggregate sources shall be operated to produce the quantity and quality of materials meeting these specification requirements in the specified time limit.

### 3.2 STOCKPILING MATERIALS

Prior to stockpiling the material, the storage sites shall be cleared and leveled by the Contractor. All materials, including approved material available from excavation and grading, shall be stockpiled in the manner and at the locations designated. Aggregates shall be stockpiled in such a manner that will prevent segregation. Aggregates and binders obtained from different sources shall be stockpiled separately.

### 3.3 PREPARATION OF UNDERLYING COURSE SUBGRADE

The subgrade, including shoulders, shall be cleaned of all foreign substances. At the time of surface course construction, the underlying course subgrade shall contain no frozen material. Ruts or soft yielding spots in the underlying course subgrade areas having inadequate compaction and deviations of the surface from the requirements set forth herein shall be corrected by loosening and removing soft or unsatisfactory material and by adding approved material, reshaping to line and grade and recompacting to density requirements. The completed subgrade shall not be disturbed by traffic or other operations and shall be maintained by the Contractor in a satisfactory condition until the surface course is placed.

### 3.4 GRADE CONTROL

During construction, the lines and grades including crown and cross slope indicated for the aggregate surface course shall be maintained by means of line and grade stakes placed by the Contractor in accordance with the SPECIAL CONTRACT REQUIREMENTS.

### 3.5 MIXING AND PLACING MATERIALS

The materials shall be mixed and placed to obtain uniformity of the material and a uniform optimum water content for compaction. The Contractor shall make adjustments in mixing, placing procedures, or in equipment to obtain the true grades, to minimize segregation and degradation, to obtain the desired water content, and to ensure a satisfactory surface course.

### 3.6 LAYER THICKNESS

The aggregate material shall be placed on the subgrade in layers of uniform thickness. When a compacted layer of 6 inches or less is specified, the material may be placed in a single layer; when a compacted thickness of more than 6 inches is required, no layer shall exceed 6 inches nor be less than 3 inches when compacted.

### 3.7 COMPACTION

Each layer of the aggregate surface course shall be compacted with approval compaction equipment. The water content during the compaction procedure shall be maintained at optimum or at the percentage specified by the Contracting Officer. In locations not accessible to the rollers, the mixture shall be compacted with mechanical tampers. Compaction shall continue until each layer through the full depth is compacted to at least 100 percent of laboratory maximum density. Any materials that are found to be unsatisfactory shall be removed and replaced with satisfactory material or reworked to produce a satisfactory material.

### 3.8 PROOF ROLLING

Proof rolling of the areas designated shall be in addition to compaction specified above and shall consist of application of 30 coverages with a heavy rubber-tired roller having four tires abreast with each tire loaded to 30,000 pounds and tires inflated to 150 psi. In the areas designated, proof rolling shall be applied to the top lift of layer on which surface course is laid and to each layer of the base course. Water content of the lift of the layer on which the surface course is placed and each layer of the aggregate surface course shall be maintained at optimum or at the percentage directed from the start of compaction to the completion of a proof rolling. Materials in the aggregate surface course or underlying materials indicated unacceptable by the proof rolling shall be removed and replaced, as directed, with acceptable materials.

### 3.9 EDGES OF AGGREGATE-SURFACED ROAD

Approved material shall be placed along the edges of the aggregate surface course in such quantity as to compact to the thickness of the course being constructed. When the course is being constructed in two or more layers, at least 1 foot of shoulder width shall be rolled and compacted simultaneously with the rolling and compacting of each layer of the surface course.

### 3.10 SMOOTHNESS TEST

The surface of each layer shall not show any deviations in excess of 3/8 inch when tested with a 10 foot straightedge applied both parallel with and at right angles to the centerline of the area to be paved. Deviations exceeding this amount shall be corrected by the Contractor by removing material, replacing with new material, or reworking existing material and compacting, as directed.

### 3.11 THICKNESS CONTROL

The completed thickness of the aggregate surface course shall be within 1/2 inch, plus or minus, of the thickness indicated on plans. The thickness of the aggregate surface course shall be measured at intervals in such manner that there will be a thickness measurement for at least each 500 square yards of the aggregate surface course. The thickness measurement shall be made by test holes at least 3 inches in diameter through the aggregate surface course. When the measured thickness of the aggregate surface course is more than 1/2 inch deficient in thickness, the Contractor, at no additional expense to the Government, shall correct such areas by scarifying, adding mixture of proper gradation, reblading, and recompacting, as directed. Where the measured thickness of the aggregate surface course is more than 1/2 inch thicker than that indicated, it shall be considered as conforming with the specified thickness requirements plus 1/2 inch. The average job thickness shall be the average of the job measurements determined as specified above, but shall be within 1/4 inch of the thickness indicated. When the average job thickness fails to meet this criterion, the Contractor shall, at no additional expense to the Government, make corrections by scarifying, adding or removing mixture of proper gradation, and reblading and recompacting, as directed.

### 3.12 DENSITY TESTS

Density shall be measured in the field in accordance with ASTM D 1556 or ASTM D 2922. For the method presented in ASTM D 1556 the base plate as shown in the drawing shall be used. For the method presented in ASTM D 2922 the calibration curves shall be checked and adjusted, if necessary, using only the sand cone method as described in paragraph Calibration of the ASTM publication. Tests performed in accordance with ASTM D 2922 result in a wet unit weight of soil and when using this method, ASTM D 3017 shall be used to determine the moisture content of the soil. The calibration curves furnished with the moisture gauges shall also be checked along with density calibration checks as described in ASTM D 3017. The calibration checks of both the density and moisture gauges shall be made by the prepared containers of material method, as described in paragraph Calibration of ASTM D 2922, on each different type of material being tested at the beginning of a job and at intervals, as directed.

### 3.13 WEAR TEST

Wear tests shall be made in conformance with ASTM C 131.

### 3.14 MAINTENANCE

The aggregate surface course shall be maintained in a condition that will meet all specification requirements until accepted.

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## SECTION 02821A

## FENCING

04/04

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

## ASTM INTERNATIONAL (ASTM)

|                   |  |
|-------------------|--|
| ASTM A 153/A 153M | (2004) Zinc Coating (Hot-Dip) on Iron and Steel Hardware                               |
| ASTM A 176        | (1999; R 2004) Stainless and Heat-Resisting Chromium Steel Plate, Sheet, and Strip     |
| ASTM A 392        | (2003) Zinc-Coated Steel Chain-Link Fence Fabric                                       |
| ASTM A 478        | (1997; R 2002) Chromium-Nickel Stainless Steel Weaving and Knitting Wire               |
| ASTM A 491        | (2003) Aluminum-Coated Steel Chain-Link Fence Fabric                                   |
| ASTM A 780        | (2001) Repair of Damaged and Uncoated Areas of Hot-Dipped Galvanized Coatings          |
| ASTM A 824        | (2001) Metallic-Coated Steel Marcellled Tension Wire for Use With Chain Link Fence     |
| ASTM C 94/C 94M   | (2004a) Ready-Mixed Concrete   |
| ASTM F 1043       | (2004) Strength and Protective Coatings on Metal Industrial Chain-Link Fence Framework |
| ASTM F 1083       | (2004) Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures   |
| ASTM F 1184       | (2003) Industrial and Commercial Horizontal Slide Gates                                |
| ASTM F 626        | (1996a; R 2003) Fence Fittings   |
| ASTM F 883        | (2004) Padlocks  |
| ASTM F 900        | (2003) Industrial and Commercial Swing Gates   |

## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

### SD-07 Certificates

#### Chain Link Fence

Statement, signed by an official authorized to certify on behalf of the manufacturer, attesting that the chain link fence and component materials meet the specified requirements.

## PART 2 PRODUCTS

### 2.1 FENCE FABRIC

Fence fabric shall conform to the following:

#### 2.1.1 Chain Link Fence Fabric

ASTM A 392, Class 1, zinc-coated steel wire with minimum coating weight of 1.2 ounces of zinc per square foot of coated surface, or ASTM A 491, Type I, aluminum-coated steel wire. Fabric shall be fabricated of 9 gauge wire woven in 2 inch mesh. Fabric height shall be as shown. Fabric shall be twisted and barbed on the top selvage and knuckled on the bottom selvage.

### 2.2 GATES

ASTM F 900 and/or ASTM F 1184. Gate shall be the type and swing shown. Gate frames shall conform to strength and coating requirements of ASTM F 1083 for Group IA, steel pipe, with external coating Type A, nominal pipe size (NPS) 1-1/2. Gate frames shall conform to strength and coating requirements of ASTM F 1043, for Group IC, steel pipe with external coating Type A or Type B, nominal pipe size (NPS) 1-1/2. Gate fabric shall be as specified for chain link fabric. Gate leaves more than 8 feet wide shall have either intermediate members and diagonal truss rods or shall have tubular members as necessary to provide rigid construction, free from sag or twist. Gate leaves less than 8 feet wide shall have truss rods or intermediate braces. Gate fabric shall be attached to the gate frame by method standard with the manufacturer except that welding will not be permitted. Latches, hinges, stops, keepers, rollers, and other hardware items shall be furnished as required for the operation of the gate. Latches shall be arranged for padlocking so that the padlock will be accessible from both sides of the gate. Stops shall be provided for holding the gates in the open position. For high security applications, each end member of gate frames shall be extended sufficiently above the top member to carry three strands of barbed wire in horizontal alignment with barbed wire strands on the fence.

### 2.3 POSTS

#### 2.3.1 Metal Posts for Chain Link Fence

ASTM F 1083, zinc-coated. Group IA, with external coating Type A steel pipe. Line posts and terminal (corner, gate, and pull) posts selected shall be of the same designation throughout the fence. Gate post shall be

for the gate type specified subject to the limitation specified in ASTM F 900 and/or ASTM F 1184.

## 2.4 BRACES AND RAILS

ASTM F 1083, zinc-coated, Group IA, steel pipe, size NPS 1-1/4. Braces and rails shall be Group IA, steel pipe, size NPS 1-1/4 or Group II, formed steel sections, size 1-21/32 inch and shall be zinc coated (Type A).

## 2.5 WIRE

### 2.5.1 Tension Wire

Tension wire shall be Type I or Type II, Class 4 coating, in accordance with ASTM A 824.

## 2.6 ACCESSORIES

ASTM F 626. Ferrous accessories shall be zinc or aluminum coated. Truss rods shall be furnished for each terminal post. Truss rods shall be provided with turnbuckles or other equivalent provisions for adjustment. Barbed wire support arms shall be the single arm type and of the design required for the post furnished. Tie wire for attaching fabric to rails, braces, and posts shall be 9 gauge steel wire and match the coating of the fence fabric. Miscellaneous hardware coatings shall conform to ASTM A 153/A 153M unless modified.

## 2.7 BARBED TAPE

Reinforced barbed tape, double coil, for fence toppings shall be fabricated from 430 series stainless steel with a hardness range of Rockwell (30N) 37-45 conforming to the requirements of ASTM A 176. The stainless steel strip shall be 0.025 inch thick by 1 inch wide before fabrication. Each barb shall be a minimum of 1.2 inch in length, in groups of 4, spaced on 4 inch centers. The stainless steel core wire shall have a 0.098 inch diameter with a minimum tensile strength of 140 psi and shall be in accordance with ASTM A 478. Sixteen gauge stainless steel twistable wire ties shall be used for attaching the barbed tape to the barbed wire.

## 2.8 CONCRETE

ASTM C 94/C 94M, using 3/4 inch maximum size aggregate, and having minimum compressive strength of 3000 psi at 28 days. Grout shall consist of one part portland cement to three parts clean, well-graded sand and the minimum amount of water to produce a workable mix.

## 2.9 PADLOCKS

Padlocks shall conform to ASTM F 883, Type PO1, Grade 6. , Size 1-3/4 inch. All padlocks shall be keyed alike.

## PART 3 EXECUTION

### 3.1 INSTALLATION

Fence shall be installed to the lines and grades indicated. The area on either side of the fence line shall be cleared to the extent indicated. Line posts shall be spaced equidistant at intervals not exceeding 10 feet. Terminal (corner, gate, and pull) posts shall be set at abrupt changes in



vertical and horizontal alignment. Fabric shall be continuous between terminal posts; however, runs between terminal posts shall not exceed 500 feet. Any damage to galvanized surfaces, including welding, shall be repaired with paint containing zinc dust in accordance with ASTM A 780.

### 3.2 EXCAVATION

Post holes shall be cleared of loose material. Waste material shall be spread where directed. The ground surface irregularities along the fence line shall be eliminated to the extent necessary to maintain a 1 inch clearance between the bottom of the fabric and finish grade.

### 3.3 POST INSTALLATION

#### 3.3.1 Posts for Chain Link Fence

Posts shall be set plumb and in alignment. Except where solid rock is encountered, posts shall be set in concrete to the depth indicated on the drawings. Concrete and grout shall be thoroughly consolidated around each post, shall be free of voids and finished to form a dome. Concrete and grout shall be allowed to cure for 72 hours prior to attachment of any item to the posts. Driven posts shall be set to a minimum depth of 3 feet and shall be protected with drive caps when being set. For high security fences, fence post rigidity shall be tested by applying a 50 pound force on the post, perpendicular to the fabric, at 5 feet above ground; post movement measured at the point where the force is applied shall be less than or equal to 3/4 inch from the relaxed position; every tenth post shall be tested for rigidity; when a post fails this test, further tests on the next four posts on either side of the failed post shall be made; all failed posts shall be removed, replaced, and retested at the Contractor's expense.

### 3.4 RAILS

#### 3.4.1 Top Rail

Top rail shall be supported at each post to form a continuous brace between terminal posts. Where required, sections of top rail shall be joined using sleeves or couplings that will allow expansion or contraction of the rail. Top rail, if required for high security fence, shall be installed as indicated on the drawings.

### 3.5 BRACES AND TRUSS RODS

Braces and truss rods shall be installed as indicated and in conformance with the standard practice for the fence furnished. Horizontal (compression) braces and diagonal truss (tension) rods shall be installed on fences over 6 feet in height. A center brace or 2 diagonal truss rods shall be installed on 12 foot fences. Braces and truss rods shall extend from terminal posts to line posts. Diagonal braces shall form an angle of approximately 40 to 50 degrees with the horizontal. No bracing is required on fences 6 feet high or less if a top rail is installed.

### 3.6 CHAIN LINK FABRIC

Chain link fabric shall be installed on the outside of the post. Fabric shall be attached to terminal posts with stretcher bars and tension bands. Bands shall be spaced at approximately 15 inch intervals. The fabric shall be installed and pulled taut to provide a smooth and uniform appearance free from sag, without permanently distorting the fabric diamond or

reducing the fabric height. Fabric shall be fastened to line posts at approximately 15 inch intervals and fastened to all rails and tension wires at approximately 12 inch intervals. Fabric shall be cut by untwisting and removing pickets. Splicing shall be accomplished by weaving a single picket into the ends of the rolls to be joined. The bottom of the installed fabric shall be 1 plus or minus 1/2 inch above the ground. For high security fence, after the fabric installation is complete, the fabric shall be exercised by applying a 50 pound push-pull force at the center of the fabric between posts; the use of a 30 pound pull at the center of the panel shall cause fabric deflection of not more than 2-1/2 inches when pulling fabric from the post side of the fence; every second fence panel shall meet this requirement; all failed panels shall be resecured and retested at the Contractor's expense.

### 3.7 BARBED WIRE SUPPORTING ARMS AND BARBED WIRE

#### 3.7.1 General Requirements

Barbed wire supporting arms and barbed wire shall be installed as indicated and as recommended by the manufacturer. Supporting arms shall be anchored to the posts in a manner to prevent easy removal with hand tools. Barbed wire shall be pulled taut and attached to the arms with clips or other means that will prevent easy removal.

### 3.8 GATE INSTALLATION

Gates shall be installed at the locations shown. Hinged gates shall be mounted to swing as indicated. Latches, stops, and keepers shall be installed as required. Hinge pins, and hardware shall be welded or otherwise secured to prevent removal.

### 3.9 BARBED TAPE INSTALLATION

Barbed tape shall be stretched out to its manufacturer's recommended length, set on top of the barbed wire and "V" shaped support arms, and then secured to the barbed wire. The barbed tape shall be secured to the barbed wire at the two points and at every spiral turn of both coils as shown on the drawings.

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## SECTION 02921

## SEEDING

**05/04**

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## SECTION 02921

SEEDING  
05/04

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

## U.S. DEPARTMENT OF AGRICULTURE (USDA)

AMS Seed Act (1940; R 1988; R 1998) Federal Seed Act

## 1.2 DEFINITIONS

## 1.2.1 Stand of Grass

95 percent ground cover of the established species.

## 1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

## SD-03 Product Data

## Fertilizer

Include physical characteristics, and recommendations.

## SD-07 Certificates

State certification and approval for seed

## 1.4 DELIVERY, STORAGE, AND HANDLING

## 1.4.1 Delivery

## 1.4.1.1 Seed Protection

Protect from drying out and from contamination during delivery, on-site storage, and handling.

## 1.4.1.2 Fertilizer and Lime Delivery

Deliver to the site in original, unopened containers bearing manufacturer's chemical analysis, name, trade name, trademark, and indication of conformance to state and federal laws. Instead of containers, fertilizer and lime may be furnished in bulk with certificate indicating the above information.

#### 1.4.2 Storage

##### 1.4.2.1 Seed, Fertilizer and Lime Storage

Store in cool, dry locations away from contaminants.

##### 1.4.2.2 Handling

Do not drop or dump materials from vehicles.

#### 1.5 TIME RESTRICTIONS AND PLANTING CONDITIONS

##### 1.5.1 Restrictions

Do not plant when the ground is frozen, snow covered, muddy, or when air temperature exceeds 90 degrees Fahrenheit.

#### 1.6 TIME LIMITATIONS

##### 1.6.1 Seed

Apply seed within twenty four hours after seed bed preparation.

### PART 2 PRODUCTS

#### 2.1 SEED

##### 2.1.1 Classification

Provide State-certified seed of the latest season's crop delivered in original sealed packages, bearing producer's guaranteed analysis for percentages of mixtures, purity, germination, weedseed content, and inert material. Label in conformance with AMS Seed Act and applicable state seed laws. Wet, moldy, or otherwise damaged seed will be rejected. See Plans for Seeding Species, Mixes and Planting Dates.

##### 2.1.2 Seed Mixture

See table on plans for seed species, application rates and planting dates.

#### 2.2 FERTILIZER

##### 2.2.1 Granular Fertilizer

Synthetic, granular controlled release fertilizer containing the following minimum percentages, by weight, of plant food nutrients:

- 10 percent available nitrogen
- 10 percent available phosphorus
- 10 percent available potassium

##### 2.2.2 Hydroseeding Fertilizer

Controlled release fertilizer, to use with hydroseeding and composed of pills coated with plastic resin to provide a continuous release of nutrients for at least 6 months and containing the following minimum percentages, by weight, of plant food nutrients.

- 10 percent available nitrogen

10 percent available phosphorus  
10 percent available potassium

## 2.3 MULCH

Mulch shall be free from noxious weeds, mold, and other deleterious materials.

### 2.3.1 Straw

Stalks from oats, wheat, rye, barley, or rice. Furnish in air-dry condition and of proper consistency for placing with commercial mulch blowing equipment. Straw shall contrain no fertile seed.

### 2.3.2 Hay

Air-dry condition and of proper consistency for placing with commercial mulch blowing equipment. Hay shall be sterile, containing no fertile seed.

### 2.3.3 Wood Cellulose Fiber Mulch

Use recovered materials of either paper-based (100 percent) or wood-based (100 percent) hydraulic mulch. Processed to contain no growth or germination-inhibiting factors and dyed an appropriate color to facilitate visual metering of materials application. Composition on air-dry weight basis: 9 to 15 percent moisture, pH range from 5.5 to 8.2. Use with hydraulic application of grass seed and fertilizer.

## 2.4 WATER

Source of water shall be approved by Contracting Officer and of suitable quality for irrigation, containing no elements toxic to plant life.

## PART 3 EXECUTION

### 3.1 PREPARATION

#### 3.1.1 EXTENT OF WORK

Provide soil preparation, fertilizing, seeding, and surface topdressing of all newly graded finished earth surfaces, unless indicated otherwise, and at all areas inside or outside the limits of construction that are disturbed by the Contractor's operations.

##### 3.1.1.1 Fertilizer Application Rates

Apply fertilizer at rates as determined by laboratory soil analysis of the soils at the job site. For bidding purposes only apply at rates for the following:

Synthetic Fertilizer 2000 pounds per acre .

Hydroseeding Fertilizer 1500 pounds per acre.

### 3.2 SEEDING

#### 3.2.1 Seed Application Seasons and Conditions

Immediately before seeding, restore soil to proper grade. Do not seed when

ground is muddy, frozen, snow covered or in an unsatisfactory condition for seeding. If special conditions exist that may warrant a variance in the above seeding dates or conditions, submit a written request to the Contracting Officer stating the special conditions and proposed variance. Apply seed within twenty four hours after seedbed preparation. Sow seed by approved sowing equipment. Sow one-half the seed in one direction, and sow remainder at right angles to the first sowing.

### 3.2.2 Seed Application Method

Seeding method shall be hydroseeding.

#### 3.2.2.1 Hydroseeding

First, mix water and fiber. Wood cellulose fiber, paper fiber, or recycled paper shall be applied as part of the hydroseeding operation. Fiber shall be added at 1,000 pounds, dry weight, per acre. Then add and mix seed and fertilizer to produce a homogeneous slurry. Seed shall be mixed to ensure broadcasting at the rate of 5 pounds per 1000 square feet. When hydraulically sprayed on the ground, material shall form a blotter like cover impregnated uniformly with grass seed. Spread with one application with no second application of mulch.

### 3.2.3 Mulching

#### 3.2.3.1 Hay or Straw Mulch

Hay or straw mulch shall be spread uniformly at the rate of 2 tons per acre. Mulch shall be spread by hand, blower-type mulch spreader, or other approved method. Mulching shall be started on the windward side of relatively flat areas or on the upper part of steep slopes, and continued uniformly until the area is covered. The mulch shall not be bunched or clumped. Sunlight shall not be completely excluded from penetrating to the ground surface. All areas installed with seed shall be mulched on the same day as the seeding. Mulch shall be anchored immediately following spreading.

#### 3.2.3.2 Asphalt Adhesive Tackifier

Asphalt adhesive tackifier shall be sprayed at a rate between 10 to 13 gallons per 1000 square feet. Sunlight shall not be completely excluded from penetrating to the ground surface.

#### 3.2.3.3 Non-Asphaltic Tackifier

Hydrophilic colloid shall be applied at the rate recommended by the manufacturer, using hydraulic equipment suitable for thoroughly mixing with water. A uniform mixture shall be applied over the area.

#### 3.2.3.4 Asphalt Adhesive Coated Mulch

Hay or straw mulch may be spread simultaneously with asphalt adhesive applied at a rate between 10 to 13 gallons per 1000 square feet, using power mulch equipment which shall be equipped with suitable asphalt pump and nozzle. The adhesive-coated mulch shall be applied evenly over the surface. Sunlight shall not be completely excluded from penetrating to the ground surface.



#### 3.2.4 Watering

Start watering areas seeded as required by temperature and wind conditions.

Apply water at a rate sufficient to insure thorough wetting of soil to a depth of 2 inches without run off. During the germination process, seed is to be kept actively growing and not allowed to dry out.

#### 3.3 PROTECTION OF TURF AREAS

Immediately after turfing, protect area against traffic and other use.

-- End of Section --